Drug & Cosmetic INDUSTRY

NOVEMBER, 1948

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"All right folks, you have a long two-hour program ahead of you."

KEEPING POSTED

Oscar Ewing and the U. S. Treasury

TRYING to do an efficient job in a Federal government position must be a discouraging undertaking when one runs counter of all the red tape and restrictions that exist to plague one. Take the case of Federal Security Administrator Oscar R. Ewing who recently was the subject of rather unfavorable publicity brought about by Comptroller General Lindsay C. Warren, so-called "watchdog" of the Treasury. Since there were no "satisfactory" restaurants near his office and the building cafeteria and executive dining room, besides having slow and unsatisfactory service, were crowded and afforded no privacy, Mr. Ewing found that members of his staff "were spending a good deal of time in going uptown for lunch." Because he thought this time could better be devoted to business, Mr. Ewing obtained an employee of St. Elizabeth's Hospital, a federal mental institution, who spent five hours a day in preparing and serving meals to Mr. Ewing, his staff, and important visitors. Mr. Ewing regarded the arrangement so valuable that he paid out of his own pocket for all the food used. However, regardless of the great benefit derived by the government and the people of the country through such an arrangement, and regardless of the fact that such an arrangement would be proper for any private enterprise, Mr. Ewing is forbidden to continue the use of this man until Congress enacts specific legislation authorizing the arrangement. It seems that this man gets $62 per week, or $3225 per year for time to be spent at the hospital. Think of the shortsightedness of an action of this kind, specially in the face of the money truly wasted by the government.

Kidney Pill Claims

KIDNEY pills containing extract of asparagus seed, extract of buchu, squill, extract of digitalis, podophyllin, potassium nitrate, and juniper oil, has been charged by the FTC as being advertised falsely. Claims objected to are that the product will "counteract or beneficially affect damage to the kidneys resulting from excessive use of alcohol; will restore the normal functions of the kidneys and bladder and stimulate these organs to act in a natural manner; will relieve and correct conditions such as swollen ankles, pains in the region of the back and waist, a burning sensation in the urethra and scanty and too frequent urination; and constitutes a competent and effective treatment for every disease or disorder of the kidneys or bladder."

"Juniper oil, which is contained in the preparation, will irritate normal kidneys under certain conditions, and use of this drug, when the kidneys are diseased, may result in serious injury," says the complaint. Digitalis and squill act as powerful heart stimulents, and tend to accumulate in the body, according to the complaint, and may lead to serious injury to the heart and circulatory system. The amount supplied by the pills when taken as directed, should only be used under supervision of a physician.

Mineral Oil and the FDA

MINERAL oil added to a mayonnaise preparation to the extent of 77 per cent was seized by the Food and Drug Administration under the FDA charge that mineral is "a deleterious substance which may render such article dangerous to health." FDA told the court that mineral is not dangerous under all conditions, but in this instance is considered harmful. The court stated that "the burden of proof is upon the United States of America to establish that the added deleterious ingredient may render the product injurious to health," and that "the Government is required under its burden of proof to prove its case by a preponderance of evidence." The court said further:

"Possibly this language needs further amplification. The word 'may' is here used in its ordinary and usual significance. It connotes a tendency or possibility that if the substance complained against may possibly injure the health of any user, it comes within the ban of the statute. If it cannot by any possibility, when the facts are reasonably considered, injure the health of any consumer, even though it contains a small amount of deleterious ingredient, such product may not be condemned under the law. The word 'deleterious' as used in the statute means harmful, destructive, noxious, pernicious."

Scientific Smelling

THE wonders of science have led Cornell psychologists to develop scientific smelling. Through use of a "smell proof" double glass cage equipped with air pressure and air conditioning apparatus controlling humidity, temperature, and the amount of odor-bearing air, a freshly bathed observer with his nasal and throat passages deodorized, and wearing a fiberglass envelope, made the discovery that a mixture of peach and grapefruit smells "fruity."

Not B_1 Preparation Says FTC

A PREPARATION containing "preservatives, artificial coloring, and significant amounts of glycerin and alcohol and thus is not, as claimed by the corporation, compounded entirely from extracts of roots, herbs and barks, plus vitamin B_1," is charged by the FTC with false advertising. The complaints are: It does not contain "liberal quantities" of vitamin B_1, and the amount will not correct vitamin B_1 deficiency or any symptoms thereof; it is a feeble appetizer and will not increase the appetite to aid a person to gain weight or strength; it cannot be stated that the product is not a laxative, nor can it be stated that the product has any value in relief of constipation except temporary relief afforded by its laxative action; it is not a treatment for heartburn, indigestion, stomach gas, nervousness, muscular pains, run-down condition, weakness or a toxic feeling; it has no therapeutic effect on loss of weight, loss of sleep, sour stomach, or any condition which may prevent an individual from working.

Abbott, Merck, and Squibb Get Ad Awards

ABBOTT, Merck, and Squibb shared top honors in each winning a 1948 "Best of Industry" Direct Mail Award. In presenting the awards, Ellis G. Bishop, advertising manager, Royal Typewriter Company, said that the pharmaceutical industry was one of three among 78 industries whose "well planned, thorough and elaborate campaigns were dominant."

Researching for Medicinals

IN THE search for new medicinal compounds, scientists are synthesizing new compounds so rapidly that there is danger of neglecting those already developed, according to Abbott Laboratories' Executive Vice-president, Dr. E. H. Volwiler. With universities, government laboratories, and industrial researchers turning out thousands of new compounds looking toward useful drugs, a large part of this work is done without advance theories of relationship of chemical composition to physiological action, says Dr. Volwiler. Research is often based on the theory that testing a thousand compounds brings twice the chance of success as testing 500. It is just as logical to try to find on the shelf or in the stockroom some compounds which merit pharmacological and clinical testing as it is to go to the trouble of synthesizing new ones, says Dr. Volwiler. The National Research Council is arranging for pharmacological evaluation of compounds, no matter for what purpose they have been made.

Bacitracin Now Available

THE antibiotic, Bacitracin, is now commercially available, having been approved by the Food and Drug Administration. This drug is active against the common streptococci and staphylococci, and also against certain gram-negative organisms. It is said to be effective against many strains of pathogens resistant to penicillin, and superior to penicillin in treatment of many pyrogenic lesions, especially in mixed infections, and when one or both of the pyogens are resistant to penicillin. Bacitracin is administered topically to surface wounds, and is injected by local infiltration into the base of pyogenic lesions. It may be used for irrigation of infected wounds and is applied in ointment form for many infectious conditions of the skin and of external ocular infections. It is not at present given by intramuscular or intravenous injections.

Packaging Exposition for 1949

THE Packaging Exposition of the American Management Association will be held next May 10 to 13 in the Public Auditorium, Atlantic City. This exposition will be the largest yet, according to predictions, with more than 200 exhibitors displaying developments in packaging, packing and shipping machinery, equipment, materials, design and services. The four-day conference on packaging, packing and shipping will be held in the Auditorium at the same time.

Retailers and Profit Outlook

A DROP of 12 per cent in drug store volume would cause one-half of the nation's druggists to lose all their profits, H. W. (Tommy) Adkins, of Yahr-Lange, told the NARD last month. Giving the results of an operating cost study which adjusted the Lilly Digest figures for 1947 by eliminating the high prescription volume stores which reported the strongest nets, he explained: 5,400 druggists now get salaries only, no profit; 6,000 would lose profits if sales declined 6 per cent; 10,800 would lose profits if sales dropped from 6 to 12 per cent; 19,800 would be without profit if sales dropped from 15 to 27 per cent; the remaining 18,000 druggists are safe up to a decline of 30 per cent.

Barbiturate Safety Valve

A SIMPLE combination of a barbiturate with ipecac has solved the problem of death through overdoses of barbiturates. William A. Spencer, Incorporated, Los Angeles, is now marketing ethically capsules containing 1½ gr. pentobarbital sodium and ½ gr. ipecac under the name of Sed-ems. The capsules provide the medication desired of pentobarbital, but as dosage increases toward the toxic line, the increased dosage of ipecac causes nausea and elimination by the patient through expectorant and emetic action. This elimination provides the safeguard factor to the administration of barbiturates.

We wonder if such a safeguard would make possible the sale of this type of product over the counter. Certainly it would be impossible for a person to kill oneself either accidently, or on purpose with this sort of preparation. And it is accidental or intentional through the use of the barbiturates which has caused these products to be placed under restriction to physicians' prescriptions.

Mason and the F. T. C.

ADDRESSING his audience as "fellow law violators," explaining that the terms "businessman" and "law violators" are "practically synonymous," Federal Trade Commissioner Lowell B. Mason recently recited the following jingle as typical of the way in which the FTC enforces the laws under its jurisdiction:

Eenie meenie minie dink
Throw one merchant in the clink
Eenie meenie minie moe
Let the other merchants go

Claiming that "a whole nation of businessmen" is violating the Commission's edicts, explained that since the Commission does not have the time or money to sue everybody, it's like playing tag. He then explained how to avoid being "it." Advising his listeners not to "mess around with trying to defend your quantity discounts, just come down to the Federal Trade Commission and lay your head on the block, it's much easier, because as Mr. Justice Jackson said in his Morton Salt dissent: 'The law in this case in a nutshell is that no quantity discount is valid if the Commission chooses to say it is not.'" Another piece of advice, according to Mr. Mason, is "Be sure you don't know your competitor's prices." Spelling "salt" with a "c" he referred to the basing point elimination as the Five C cases. Then he suggested a jingle:

"Cement, conduit, crepe, corn and calt
Every business call a halt . . . . "

Finish the jingle with two more lines, he said, and "I'll give you a bound copy of our annual report for 1914 if there are any left." (The FTC was not organized until 1915).

Squibb Sales at Record

SALES volume of E. R. Squibb & Sons reached an all-time high in the fiscal year ending June 30, 1948 when sales totaled $74 million, against $68 million in 1947, $59 million in 1946, and an average of $17 million in the years 1935 to 1939. Thus this company is now operating at a rate of dollar sales volume more than four times as great as during the late thirties. However, higher costs and lower selling prices on important items are more than offsetting the benefits, profit-wise, of the increasing sales volume. Squibb, like others, have been experiencing trouble with its cosmetic branch, Lentheric showing a loss in the fiscal year ending this June.

Plant Sanitation Methods

MAINTENANCE of sanitary conditions in the plants of this industry is the subject of a set of recommendations drafted by the Combined Pharmaceutical Contact Committee of the American Drug Manufacturers Association and the American Pharmaceutical Manufacturers Association, and reviewed by the Food and Drug Administration. The recommendations, while drafted principally for the drug industry as such, are intended to apply to the manufacture of food supplements or foods for special dietary purposes, and to the manufacture of cosmetics. Copies may be had from either of the associations sponsoring preparation of the recommendations.

The Navy's Ten Medical Developments

THE ten greatest developments, "any one of which would be difficult to do without in modern medical practice," are given by the United States Navy Bulletin:

1. The Hippocratic Code of medical ethics.
2. The use of the ligature in the control of hemorrhage.
3. The discovery of cinchona, the first important specific in therapy.
4. Smallpox vaccination, which has saved more lives, prevented more blindness, disfigurement, and human misery than any other one medical discovery.
5. The bacterial origin of disease, the work of Pasteur and Koch.
6. The development of antiseptic and aseptic surgery (and obstetrics).
7. Discovery of the transmission of disease by insects or other animal vectors.
8. Discovery of generally and local anesthesia.
9. Diphtheria antitoxin.
10. The x-ray.

Treatment by Remote Control

A SECRET chemical formula which would cure everything from dandruff to athlete's foot, brought a chap named Ford into a New York court recently for selling $20,000 worth of stock in the Ford Chemical Corporation mostly to veterans and their families. According to the assistant district attorney prosecuting the complaint, the preparation was so good that it didn't even have to be applied. "All you had to do was smell it to be cured."

U.S.P. Headquarters in New York

PERMANENT U.S.P. Headquarters are to be located in New York at 46 Park Avenue. The building is to be dedicated for use as Headquarters and Administration Offices of the Pharmacopoeia of the United States. The location is within walking distance of Grand Central Station, Pennsylvania Railroad Station, and the Air Lines Terminal on 42nd Street. This step is taken in conformity with the instruction and authority of the 1950 Pharmacopoeial Convention, as confirmed and embodied in the new By-laws adopted at the adjourned meeting of the Convention in Cleveland in 1942.

Squibb and J. & J. Get Brand Awards

A DIAMOND Anniversary Certificate of Public Service was awarded to E. R. Squibb & Sons for the brand name, E. R. Squibb & Sons, first introduced in 1848, by the Brand Names Foundation during the recent New Brunswick, N. J. "Parade of Progress." Squibb Vice-president Dr. William Bunney received the citation. Also a Golden Anniversary Certificate of Public Service was awarded to Johnson & Johnson for the brand name, Red Cross, first introduced in 1879. J. & J. Vice-president and General Counsel Kenneth Perry received the citation. Award for the best float in the industrial section of the street parade went to Johnson & Johnson, and second place went to Squibb, whose trade-mark formed the central theme of the float.

FDA Objects To Prescription Refills

THE Food and Drug Administration is expressing objections to the refilling of prescriptions by pharmacists without authorization, stating that this action is similar to over-the-counter sales of drugs. When the drugs contained in these prescriptions are products containing the Rx legend, the FDA says that they should not be refilled without specific authority from the physician who wrote the prescription. When the prescriptions call for drugs which can legally be sold over-the-counter, FDA says that the druggist should either sell the product in its original container as an over-the-counter sale, or prepare a new package under his own label with adequate directions for use, and other information required by law.

We can see in this opinion of FDA executives is the druggist being able to satisfy neither the customer nor the physician. The customer is naturally going to resent having to obtain a new prescription (or authority of the physician to refill the existing prescription), and the physician is naturally going to resent the druggist exposing his prescription by refilling it with an original package or with a package of the druggist giving full information on the use of the product. Furthermore, if the product is not dangerous to health when sold over-the-counter, there is certainly no valid reason under any law why a prescription calling for such a drug cannot be refilled. It appears that the FDA is travelling too far along a road indicated by the decision in the Sullivan case and the Miller amendment. Quite soon action will have to be undertaken by all parties interested in the manufacture and distribution of drug products to keep FDA activity within reasonable bounds.

New Drug Information

THE Food and Drug Administration has reversed its policy of not giving information regarding new drug applications. Since the Food, Drug, and Cosmetic Act was enacted ten years ago, no information has been given out regarding new drug applications. Now the FDA will answer inquiries for such things as to whether it has permitted an application to become effective solely on the ground that it is safe to use, but labeling information has not been passed. The thing that we wish to know is how anyone will know what to ask about if the FDA does not publish the applications which are pending.

Commissioner Freer To Resign

FEDERAL Trade Commissioner Robert E. Freer, who is chairman of the Commission for 1948, will resign in December to enter private law practice. Commissioner Freer has been in Government service twenty years and is in the middle of his third term as Federal Trade Commissioner, his present term expiring in 1952. He was first appointed to the Commission by President Roosevelt in 1935, subsequently reappointed by Roosevelt, and again reappointed by President Truman. The Commissioner explains his resignation in the middle of a term by saying that he must consider his future earning capacity and the financial security of his family. Commissioner Freer will be particularly recalled to members of the cosmetic industry as the representative of the Commission who presided over the two Fair Trade Practice Conferences which consumed time and netted nothing in the way of results. The mess in which the FTC is now, causes us to wonder why they don't all resign out of a feeling of utter futility.

Synthetic Vitamin Production

VITAMIN production in this country for the first six months of this year are given by the U. S. Tariff Commission: Ascorbic acid and salts, 495,234 pounds; niacin and niacinamide, 444,031 pounds; pyridoxine (B_6), 4,082 pounds; thiamin chloride, 98,540; irradiated ergosterol (D_2), 6,247,077 million units.

Coffee Is Harmless?

COFFEE is harmless to rats, according to studies made in Cornell's Department of Animal Nutrition, some female rat coffee drinkers lived longer than their expected average. However, the scientists point out an important difference between the rat drinkers and the human drinkers—the rats only took enough coffee to satisfy their thirst—they knew when to say "No."

Now It's Meat For Teeth

FOR years we have been hearing reports of things which should be included in the diet to insure sound teeth. At one time vitamin D was certainly the answer, then calcium was the answer, and then phosphorus was essential. Now the thing that everyone formerly overlooked in this connection is meat, according to Dr. Teunis Ockerse, chief dental officer of the Union of South Africa, who recently reported in New York his findings as the result of a survey conducted over the last four years.

Corday Loses Frenzy Trade-Mark

CORDAY has lost the right to use the trade-mark Frenzy as the result of a decision of the Examiner of Interferences. When Corday originally started to use the mark, it was found that a firm, Marie Richelieu Parfum Odescent, Inc., who had been using the mark for a deodorant. An agreement was reached between Corday and Richelieu whereby Corday received an assignment of unregistered mark of Richelieu, but did not continue the business of Richelieu in the perfume deodorant, but continued to market its own Frenzy perfume, a product quite different from the Frenzy deodorant. Later Corday filed a petition for cancellation of the mark, Frenesi, sought by Mauricio y Alberto Habif y Cia., contending that Corday had a superior title to the mark, Frenzy, since they had bought the rights to Richelieu. The similarity of the two marks was admitted. The Examiner ruled that since the product upon which the mark had been used before the transfer to Corday took place had been discontinued, that the mark was no longer valid. Therefore, the petition to cancel the mark, Frenesi, was dismissed and the ownership of the mark, Frenzy, is now vested in Mauricio y Alberto Habif y Cia. It is possible that the case may be appealed.

Tartaric Acid Output High

PRODUCTION of tartaric acid by the Italian wine industry in 1947 totaled 4,729 metric tons, against 4,324 tons in 1946, says the Department of Commerce. Output in 1938 was 3,145 tons, and peak production occurred in 1942 at 6,400 tons.

Nobel Prize for DDT

THE discovery in 1939 that DDT—originally produced by a German student in 1874—was effective as an insect killer, has won for 48 year-old Paul Mueller, of Basel, Switzerland, the 1948 Nobel Prize in medicine. Dr. Mueller, who made the discovery while employed with Geigy, entered the Geigy laboratory at 25 as assistant manager in charge of work on synthetic tanning substances. The award is worth $44,000.

New Michigan Governor

G. MENNEN WILLIAMS, a nephew of William G. Mennen, head of the Mennen Company, was elected Governor of Michigan on the Democratic ticket in the recent elections. Governor-elect Williams is the son of Mrs. Henry P. Williams of Grosse Point, Mich., Mr. Mennen's sister.

Winthrop Grants-in-Aid

THE Sterling-Winthrop Research Institute, with Winthrop-Stearns, Inc., awarded 52 grants-in-aid totaling $159,644 during 1948. General grants were made for investigations and training in therapeutics, pharmacology, neuro-surgery, internal medicine, organic chemistry and related fields. Specific grants were made for research in antisepsis, spinal and topical anesthesia, general anesthesia, detergents, amino acid preparations, analgesics, chemotherapy, X-ray contrast media, antimony metabolism, general metabolism, enzymes, infectious diseases, antimalarials, amebiasis, vitamin D, asthma, heart conditions, traumatic wounds and burns, and antispasmodics. Twenty-four of the grants went to universities, medical schools and colleges, and the balance to clinics, hospitals, institutes, research foundations and individuals.

Monsanto Settles Texas City Loss

THE largest single insurance payment in history was made when Monsanto Chemical Company received $17,312,000 for losses sustained in the Texas City disaster. The sum received represented a compromise between a claim of $21,542,999 by Monsanto, and an offer made by the Oil Insurance Association of Chicago. Monsanto is understood to be pressing a very large claim against the United States Government to reimburse the company for losses not covered by the insurance payment.

Weight Reducer Cited by FTC

WEIGHT reducing tablets of a formula generally considered capable of reducing the appetite have been cited by the Federal Trade Commission under the charge that "their use will not prevent a person from becoming hungry and will not result in any appreciable reduction in the amount of food consumed or any appreciable reduction in weight." The tablets contain vitamins B_1, B_2, D, calcium, niacinamide, iron pyrophosphate, sodium chloride, coumarin, vanillin, saccharin, chocolate, and phosphorous. The complaint states that the advertising makes no mention of the necessity of following a carefully restricted diet. The FTC charges as false that the tablets are an adequate substitute for food ordinarily consumed, that hunger results from lack of vitamins and minerals, that adequate nutrition is assured by use of the product, and that its use as directed supplies the full amount of the necessary vitamins and minerals required by the average adult. The complaint contends that the product does not contain vitamins A and C and several vitamins and minerals essential to human nutrition.

Rapidly Changing Drugs

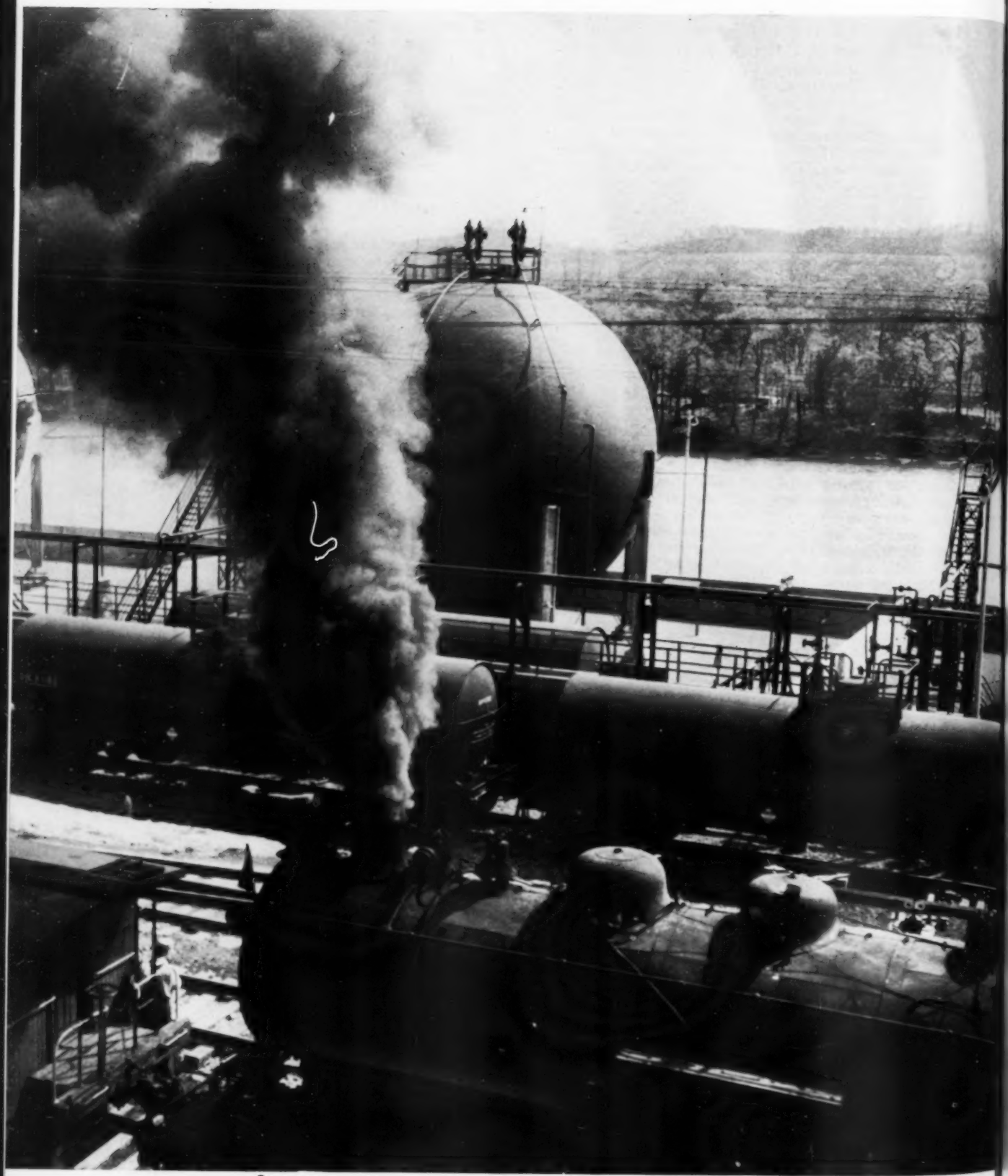
THE rapidity with which changes are taking place in the drug products used is sharply brought to our attention by a statement in the Squibb report to stockholders which shows that 55 per cent of the gross sales of the company during the 1947-48 fiscal year consisted of items introduced into the company's line in the last five years. Indicating Squibb's realization of this fact are the company's expenditures for research and development during that year which totaled $2,520,962. On many occasions we have commented on the steadily increasing acceleration of this turnover in the types of products used by physicians and sold in drug stores. Certain it is that the wartime research speeded up these changes, but they are still going on as manufacturers generally have greatly increased their research and development activities.

Lessons from the Campaign

THE recent political campaign for President again tells us to be on our guard against things that we feel we *know* are so, but which turn out not to be so at all. We had come to feel in our bones that the political campaigns with all the speech-making and fanfare were a waste of time. Perhaps it was the discredited pollsters who taught us this, but none-the-less we *knew* it. Now we find that it is not so. We find that President Truman won his surprising victory as a result of hard-fought campaign activity. It reminds us of the time when everyone who thought about it at all *knew* that liquor consumption raised the blood-pressure of an individual. However foolish it appeared, a little over a decade ago the Rockefeller Institute decided to investigate this well-known fact. They found out that it was not so, that one or two drinks do not raise the blood-pressure, they actually lower it.

Another thing which the campaign taught us is to be sure to slant your campaigns—political, sales, advertising, or any other kind—to the people you want to sell. The commuters from the suburbs of New York, most of the radio commentators, and newspapers—most of whom were for Dewey—wailed long and loud about the undignified campaign that our President was making. This is akin to a top executive of a large corporation in his large walnut paneled office sneering at the recommendations of his advertising department and his agencies when they suggest comic paper advertising, insane contests, and thrillers over the radio to sell breakfast cereals or other products in the purchase of which children have a great deal to say.

President Truman probably realized that he couldn't sell himself to any of those who liked Dewey's type of campaign anyway, so he sought to satisfy those whom he could sell. Dewey, on the other hand indulged in a type of campaign designed to sell those who were already sold. There are some real lessons in this campaign for those engaged in advertising and merchandising.



COURTESY CARBIDE AND CARBON CHEMICALS CORP.

STABILIZATION IN ALCOHOL

By THOMAS R. FARRELL

ALCOHOL production in this country is, to a large extent, moving from a base of production by the fermentation of molasses to a base of production from ethylene, a gas obtained from petroleum. It is now many years since Carbon & Carbide Chemicals Corporation undertook the first production of alcohol by this synthetic method. Over the years this company expanded its production by this method, using a large amount of the alcohol in the production of some other chemicals, selling some direct to consumers, and also selling part of it to distillers of alcohol who sold it to their customers along with their own fermentation products.

In addition to the expansion of the production of alcohol by this company, another synthetic alcohol plant was erected during the war by the Standard Oil Company of New Jersey at Baton Rouge, La. But the output of this plant was completely contracted for by the Tennessee Eastman Company before the plant was built. Therefore, this material never reached the open market although it did supply a large part of the demand for alcohol. Now the Shell Petroleum Company has erected a plant said to have a capaicty of 18,000,000 gallons per annum. Of this 10,000,000 gallons is said to be contracted for by an alcohol distiller for sale to its customers, another 3,000,000 gallons is contracted for by a large industrial consumer, and the balance will be either consumed or sold by Shell itself. There are reports that a number of other plants for production of alcohol from petroleum are contemplated.

All of which indicates that the production base of alcohol is swinging from molasses to petroleum to a marked degree. This situation is, in fact, called to attention by the U. S. Department of Commerce which just last month reported:

"Recent offering for lease of two idle industrial alcohol plants by War Assets Administration and U. S. Department of Agriculture met with only moderate interest. Announced bidders were not regular alcohol producers which would seem to indicate a reluctance on their part to acquire additional facilities at this time even at favorable costs."

The cost of alcohol production from molasses has been far above the range which consumers have been used to paying due to the sharply higher prices which molasses has been bringing. Only last year molasses was sold at 34 cents per gallon, and since it takes two and one-half gallons of molasses to make one gallon of alcohol, this meant that the alcohol raw material cost alone was 85 cents per gallon. Since that time, however, the alcohol market has broken sharply until today it is priced at somewhere between 13 and 15 cents per gallon. Furthermore, it is said that there is 100 million gallons that has not moved into consumers' hands. At this price level for molasses, alcohol raw material costs stand at somewhere between 33 and 38 cents per gallon, which is less than half the raw material cost indicated by the molasses market of a year ago. How far the molasses market will decline is anybody's guess, but those interested in the market look for an increasingly large supply, resulting in a continued weak market for as far as they can see ahead. As the molasses market declines, however, its use will increase in many directions, one of which is in stock feeds.

If one thinks that the present market for molasses is low, they might recall the fact that prices as low as one and one-half cents and two and one-half cents at Cuba were the rule in the early twenties. This meant a cost in this country of less than five cents per gallon. If and when molasses will descend to these price levels is a wholly unknown factor—costs being up in practically every industry all over the world at this time.

The alcohol made from grain—preferred by many perfumers—is of course a different proposition. Here we have a domestic source of raw material controlled by government price support and various other factors. Corn is priced somewhere in the neighborhood of $1.40 per bushel, which quantity of corn yields about two and one-half gallons of alcohol. Therefore, corn at this level gives a raw material cost for grain alcohol of 56 cents.

Against the fermentation raw material costs, the costs of the synthetic process, at least at the present time, give the synthetic sellers a distinct advantage. However, new plant costs are high in this era, but once the investment in the plant is amortized, the costs are at a minimum. If the synthetic material becomes the dominant material from the point of view of production, the prices of alcohol can be expected to remain at comparatively steady price levels year in and year out. Price changes, when they do occur, would be expected to

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SUNLIGHT—

SUNBATHING or the willful pursuit of solar irradiation has attained immense, world-wide popularity—among all ages, all social strata and all races. This is not the first time in recorded history that such a wave of sun-worship has taken place. The Greeks during their brief reign in history were ardent devotees. At earlier or later dates were the Aztecs, the Egyptians, the Romans and probably others unknown, all of whom engaged in some sort of sun-cult.

Today, the phenomenon of sun-worship has become the subject of considerable controversy. This is to be expected since many millions of persons during the summer months, channel a major portion of their time, energy and money into the relatively new, yet age-old, pursuit of the sun. An interesting question is what is responsible for this renaissance of sun-bathing? There are a number of legitimate and basic factors involved. One of the most important is revolutionary changes in our social structure. Due to strong resistance on the part of labor and to technologic advances, the dawn to dusk working day is happily over. A forty hour week provides sufficient time to engage in many outdoor activities heretofore impossible for millions of working people. Efficient and cheaper transportation facilities further encourage the present mass return to the outdoors. Improved economic status no doubt plays an important role. Of lesser importance are cosmetic dictates. Fashion arbiters could be for or against tanning but in either event it is a certainty that at the end of the summer a majority of the female population would exhibit epidermal surfaces anything but white. This is fact because it is well known by all that normal amounts of solar radiation exerts a healthful and flattering influence on the average skin.

The basic, fundamental motivation behind today's suncult is instinct. Yes, even today Man possesses a few feeble instincts. After a long, hard, dreary winter, to get out into the bright sun is as natural and spontaneous as breathing. The impact of the solar spectrum

Jekyll or Hyde

By L. STAMBOVSKY

on the skin is warm, pleasurable and relaxing. To the layman these sensual reactions are a sufficiency in themselves to strive for a place in the sun.

The physiologic effects of biologically effective ultraviolet energy have been subject to much although not complete study. Individually, with the exception of vitamin "D" synthesis, these effects are not too impressive. Information thus far uncovered is to a great extent general. The synthesis of vitamin "D" has been widely publicized. Increased resistance to disease, improved muscular toxicity, greater vitality and an improved sense of well-being are benefits which have been observed after solar irradiation. These effects have been conveyed to the public by both lay and technical press. The sum total of the foregoing is indicated by many millions of person participating in a vast exodus from darkness to light, from whence, before the advent of four walls, they originally came.

It is true that solar radiation is characterized by a dual potency. Its capacity for beneficience is enormous but its ability for harm is also formidable. The same statement could be made about many basic phases of life—food, sex, exercise, and bathing. A sufficiency of these vital functions is necessary or desirable but an excess can be highly damaging. However, because of such double-edged potency, we are not asked to abstain from bathing or sex or exercise. As already mentioned, the unparalleled modern sun-worship has stimulated much comment. Because opinion contrary to mass belief is more dramatic, or because of ignorance, many so-called authorities would have us abstain from sunlight—claiming that its capacity for harm overshadows its ability for good. This is of course, anything but truth.

Some of the material in the lay and semi-technical press reflects a destitute and superficial supply of facts. For example, in the August 1948 issue of Hygeia, which is published by the A.M.A. and therefore is surrounded by a halo of "deification," a V. Vieweger wrote, "Benefits of sunlight—sterilization of skin and surrounding air—increased vitamin "D" in the body and a psychic lift, are insignificant when compared to the dangers of over exposure." Further, "Blistered sun worshippers put a strain on their kidneys, may develop toxemia or shock and even die—skin cancer is 8 times as frequent among men of the U. S. navy as among the general population—has a high incidence among outdoor workers such as farmers and fishermen—is most common in regions which have strong sunlight large part of the year." Again, "But even if too much sunlight does not produce skin cancer, it may cause a large number of red corpuscles to dissolve liberating porphyrin and histamine—yellow and white petrolatum are effective in the prevention of sunburn—just as important as sunlight are rest, fresh air, proper diet, congenial occupation and favorable environment—the chief virtues of summer sun are the psychic exhilaration derived from being able to get out into the fresh air and enjoy a change of scenery and action—and the general sense of well being produced by its warmth."

Then the mighty Saturday Evening Post had its say on this very timely subject. In the July 31st, 1948 issue, J. S. Furnas, who apparently is a layman without any scientific background, writes an article entitled, "The Truth About Suntan." In a light frothy style this discourse concerns itself again with the prevalence of skin cancer in high sun areas. He states that the over-all results of sunbathing might be mildly beneficial although the point could be disputed—further he claims that the sense of well being from solar radiation can be duplicated by lying in front of an open fire. The article is long and space forbids the further abstraction of the generalities therein. Instead we shall present a condensation of known and obvious facts indicating that the intelligent use of the solar spectrum can and does play a profound role in human physiology. The reader may contrast these facts with the journalistic ramblings quoted.

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FEWER OUTLETS—SURER PROFITS

By FRAZER V. SINCLAIR

MORE and more manufacturers are looking with critical and jaundiced eyes on the words "Break-Even Point," which seem to be the business trade-mark of this era. To some business men these words have created an image of a fearful demon whose hot breath is scorching their ears and who seems destined to catch up with them and devour them the minute the inflationary spiral reaches the high-water mark. Other business men have seen their only hope of escape in a drastic reduction of overhead, which means simply spending less for all of the services and materials which they have been purchasing. A few enlightened business men have been peering upon this obvious, and not always successful avenue of escape, not only to discover more basic economies but on a broader vision to discover better ways of operating.

It is among the latter group of individuals that we find a new critical attitude toward distribution developing. This new critical attitude is based upon two questions. (One) Is my present method of distribution too expensive for what it produces, and should I take an engineering approach and, maintaining my present system, shear off that part which is not producing profits? (Two) Under my present system of distribution am I losing certain specific advantages which might actually increase my total sales at less cost If I made radical changes? These two new approaches are basically, "Can money be saved by some change in distribution which might mean loss of gross sales but an increase in net profits, but even beyond that, is it possible to completely alter distribution and secure additional advantages which might increase both gross sales and net profits?"

Some manufacturers who are initiating studies of their distribution and approaching this problem, not with any intention of changing their present system, but of analyzing each individual unit of this system are discovering some very sad mavericks and some very unprofitable cows in their retail stable. This is a very old story in market analysis. There is plenty of excellent factual business literature and case histories which show that in many, perhaps in a majority of cases where a manufacturer has mass distribution and where a direct sales force is maintained, the expense of the salesman in making certain calls greatly exceeds not only the total gross business received from that retailer, but the potential of anything that the retailer could possibly do, under the most favorable circumstances. There can hardly be any question that in the cases of a high percentage of manufacturers with large distribution, where the retailer is contacted by factory salesmen and promotion literature, that a substantial fringe of these retailers are returning, and always will return, a net loss to the company.

These facts are either known to the business executives of every big company, or these executives should have an uneasy feeling that they are not exposing themselves to enlightened business thinking and informed business literature. There is however, in American business, a sort of religious fervor that worships volume rather than profits and that appraises success in terms of large numbers rather than in terms of individual productive efficiency. Many business men are intimately aware that several thousands of their retailers not only can never hope to return them a profit, but are actually diminishing the sales, and therefore the initiative, of many of their profitable accounts. But these men can never bring themselves to the point of eliminating any retailer who can pay his bills, and so face the possible loss of total volume.

Some business men are examining their distribution from the viewpoint that they have lost the single, most potent sales argument to open up a retail account and to get the full cooperation of this store. What they have gained in return not only costs more money to maintain, but is not returning as good results in either total volume or net profits. This single, most effective sales argument is the employment of the term, "Retail Franchise."

At this very time, two well-known perfume companies, which permitted their distribution to expand considerably beyond the first line, competent retail sellers of perfumes and cosmetics, have decided that their new enlarged distribution not only costs more money to maintain, is more hazardous in such accumulating expenses as breakage, returned goods, etc., but that this new large distribution is at the point of producing less volume and less profits. The reason for this is that while the larger distribution added in each case approximately 2,000 drug stores to a distribution of around 1,500 total stores, the addition of these extra drug stores made the argument of a "Retail Franchise" absurd and insincere to that inner circle of retailers who produce nearly all of the perfume volume. In one way or another, retailers sense the pattern of distribution which a manufacturer is employing.

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LAXATIVE CLAIMS

ADVERTISING and labeling claims for laxatives must vary according to the type of ingredients used in the preparations offered. Some products are thought to be capable of increasing the flow of bile by stimulating the action of the liver. However, manufacturers of these preparations will find that the Federal enforcement agencies are of the opinion that bile salts alone are the only substances which will effect this result. It is also thought that certain laxatives will stimulate muscular action of the gall bladder and thus increase the flow of bile from the gall bladder into the first portion of the intestinal tract without affecting the bile-producing cells of the liver. Bile salts alone, unless taken in very large dosage, may not act to produce elimination in a few hours. Therefore, they must be taken over a period of time to secure the desired effects upon the liver cells. For this reason the Federal agencies are quite apt to question the advisability of combining bile salts and straight laxative ingredients, since rapid elimination of the bile salts will not allow them to produce the effect for which they should be taken.

Substances which do not act primarily as laxatives, but which absorb moisture from the gastrointestinal tract, increase the bulk in the intestines and encourage the desire for elimination. Such products, containing karaya gum, agar agar, and similar ingredients, are not correctives or cures for constipation. They may be consumed over a period of time, but unless the user acquires the habit of seeking elimination at a certain time, irregularity may recur when usage of the product is discontinued.

In considering a laxative, the Federal Trade Commission had the following to say in a Cease and Desist Order:

"Constipation is usually a symptom of some other trouble and the proper treatment is to ascertain the cause, if possible, and correct it. Those cases of constipation where no organic lesion is detected are sometimes classified as functional, and may be due to various causes, including diet, poor habits, abuse of the digestive system, and some nervous conditions. (The product in question) does not constitute a cure or remedy for constipation, its therapeutic value being limited to the temporary relief afforded by its laxative action. Though a person suffering from constipation may secure temporary relief from the use of (the product in question) or some other laxative, if the cause of his constipation is not corrected, he will revert to a state of constipation when he ceases to take the laxative.

"Respondents representation that (the product in question) has substantial therapeutic value in restoring and maintaining natural elimination is unwarranted. Normal elimination is a physiological process which takes place without the intervention of drugs, but if caused by anything other than normal foods or normal physiological processes, is abnormal. Bowel movements induced through the taking of (the product in question) do not constitute natural or normal elimination.

"Respondents represent that (the product in question) stimulates and strengthens the digestive tract and eliminative organs and muscles. The digestive organs include the stomach, liver, gall bladder, and pancreas. The only therapeutic property possessed by (the product in question) is that it is a mild irritant, bulk laxative which tends to stimulate peristaltic action by the intestines. It will not strengthen the digestive or eliminative organs or muscles or promote normal or regular action by them. Except for the tendency to stimulate peristaltic action by the intestines, it will not stimulate the digestive or eliminative organs or muscles.

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RAPID RISE IN PER CA

CALLS FOR PROGRESSIVE SALES PLAN

WHILE news headlines have told that per-capita income has advanced another $110, reaching a record of $1,323 for 1947, little attention has been paid to the potential influences of this rise upon the purchasing power of many markets which have been too insignificant for promotional efforts of national advertisers. Yet, during the last ten years revolutionary changes in the purchasing potential of American consumers have taken place. For firms engaged in any industry to ignore these changes, means that these firms are neglecting opportunities offered for expansion.

In 1939 the average per capita consumption of cosmetics amounted to only $2.69, and per capita income was only $539. Today, the per capita income for the nation is more than twice this figure, and the poorest state in the nation has a per capita income of more than $100 above the 1939 national average. Another way of viewing conditions as they exist today is: the high purchasing power of the State of New York, supporting the highest level of cosmetic demand in the Eastern area during 1939, was only $825. All but three states in the nation exceeded this figure in 1947.

An entirely new situation has developed in the cosmetic market during the last year. The earlier this fact is understood, the sooner will cosmetic sales resume their upward climb to maintain a position in proportion to the real purchasing power of the clients of cosmetic counters.

To paint the background of the picture that now confronts the cosmetic manufacturer and the cosmetic retail trades:

Only the District of Columbia—none of the States—had a per capita income of more than $1,000 in 1939, this section reporting $1,031.

Today 40 states earn per-capita incomes of higher than $1,000. Besides the District of Columbia, they are:

New England: Connecticut, Maine, Massachusetts, New Hampshire, Vermont, Rhode Island. *Middle East:* Delaware, Maryland, New Jersey, New York, Pennsylvania, West Virginia. *South East:* Florida, Virginia. *South West:* Arizona, New Mexico, Texas. *Central:* Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, Wisconsin. *North West:* Colorado, Idaho, Kansas, Montana, Nebraska, North Dakota, South Dakota, Utah, Wyoming. *Far West:* California, Nevada, Oregon, Washington.

And—ten of these states are earning more than $1,500 per-capita. They are: Connecticut, Rhode Island, Delaware, New Jersey, New York, Indiana, Montana, North Dakota, California, Nevada.—Note the large number of farm markets among these top rankers; also add the District of Columbia.

However, the formerly notoriously poor markets have moved up the scale. The following comparisons tell the story of their growing consumer-prosperity more than many lines of statistical reporting. Are they on your calling list today?

	1939	*1947*
Alabama	$242	$837
Arkansas	246	710
Georgia	290	885
Kentucky	297	850
Louisiana	354	892
Mississippi	201	659
North Carolina	308	890
South Carolina	261	778
Tennessee	295	916
Oklahoma	340	930

And what about those farm states, many of which were rather poor material only a few years back? They are competing with the best sellers of late:

	1939	*1947*
Indiana	$495	$1,287
Iowa	468	1,144
Idaho	411	1,290
Kansas	383	1,315
Nebraska	397	1,238
North Dakota	325	1,678

These few will suffice. But, the trend is universal and the toilet goods counters serving the farm markets better take notice.

Compare North Dakota and its $1,678 with the highest per-capita-figure of 1947—that of the State of New York. Its $1,781 does not look as exceptional as it did a few years back. Even Mississippi turns in a per-capita figure today that was exceeded by only 10 states in 1939.

Thinking of the major shifts in purchasing-power, as they will affect the planning of the American cosmetic industry during the next few years, the formerly high ranking East is fully equalled now by the big farming regions of the Central States. This process has become even more pronounced since 1946, even in the face of localized income recessions in the Central, Middle East and Far Western farm areas.

The following listing of states, showing how their markets have expanded since 1946, will tell cosmetic manufacturers where to look for new business; or where they may have failed, if their sales to these markets have not grown correspondingly during the post-war period.

Good: Income growth exceeded from 10 to 15 per cent in 22 states:

New England: Connecticut, New Hampshire, Rhode Island, Vermont.

Middle East: Delaware, New York, Pennsylvania.

South East: Alabama, Georgia, Louisiana, Mississippi, Tennessee.

South West: Arizona, Oklahoma.

Central: Illinois, Indiana, Minnesota, Ohio, Wisconsin.

North West: Idaho, Utah.

Far West: Oregon.

PER CAPITA EARNINGS

PLANNING BY COSMETIC INDUSTRY

Better: Per-capita income grew from 15 to 20 per cent in 6 states:

Middle East: West Virginia.

South East: New Mexico, Texas.

Central: Michigan.

North West: South Dakota, Wyoming, Montana.

Best: Per capita income grew above 20 per cent in 3 states:

All were in the *North West.* They are Colorado, Kansas, North Dakota.

Now; What do these figures signify in the face of the declining sales of cosmetics during a year when income has grown so persistently as in 1947?

It is not that the consumer was without sufficient money after paying for his everyday needs, because the surplus of income over food expenditures has risen to a level which only a few years ago would have been considered astronomical. As a matter of fact, $122 billions were left to the American people in 1945 after they had paid their food bills, and in 1947 it was $133 billion. So there was plenty of money to take care of Cosmetics and as a matter of fact enough was spent to keep the cosmetic industry busy.

But even so, there must have been thousands of highly concentrated markets where cosmetic sales remained heavily behind their potential consumption; merely becasue it was not fully realized that these markets existed.

To take the average of the ten states ranking lowest in 1947 what do we find when we compare their 1947 average per-capita income with the national cosmetic sales results of 1942 when the national per-capita income was $870? Cosmetic sales amounted to $517 millions during 1942 with a per-capita consumption of $3.86. Have Alabama, Arkansas, or any other of these ten low ranking states, made good the promise of $3.86 cosmetic sales for everyone of their citizens? How much larger would have been the total of the cosmetic volume of 1947, if they had; instead of the $37 million drop that took place during that year?

Nobody can give a satisfactory answer to these questions. However, the fact remains that the cosmetic markets of these ten states alone offer sales potentialities today that should equal those of New York in 1941 and, certainly, should treble the 1939 sales of any manufacturer who has done business within their boundaries over the past decade.

What is the remedy?

First, no doubt, must come a readjustment in the thinking of a large number of manufacturers to the fact that there are no "poor" markets anymore for cosmetics in these United States; but, that there are good ones only with an increasingly rising number of better and best ones.

Second, promotional thinking must revaluate market quotas upon the basis of potential and not habitual performance. It is quite possible that numerous manufacturers have failed to keep step with the expanding force of large sections of the cosmetic clientele and that their concentration upon the conventional best selling areas has prevented them from beaming a sufficient share of their promotional efforts to markets where new customers were waiting.

No manufacturer can reasonably expect that his own sales will follow identically the per-capita earning curve of every sector of the American cosmetic market. However, major detours from the established patterns must clearly be suspected and corrected. Especially is this true where substantial deviations are revealed by the cosmetic tax figures, or any other similar record as the local Federal Reserve Board statistics, for the regions where they are available.

Moreover, there arises the very pertinent problem as to how far a product's design, and the sales procedure of the cosmetic industry, geared as they are today to the tastes and needs of the East, Far West and the markets of the large cities, answer the requirements of these new markets where the growth of income has been proportionately greatest during the post-war period.

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PSYLLIUM SEED TODAY

By HARRY G. KELBLY

PSYLLIUM seed was first introduced as a laxative about 1925 by Lanman & Kemp, wholesale druggists of New York, and so popular did it become that by 1932-1933 it was the leading botanical import into this country in point of volume. At the peak of its enthusiastic reception by the American public annual consumption reached the tremendous sum of 5,000,000 pounds in one year. Pitchmen sold it on street corners, it was hauked by white-jacketed salesmen in drug store windows, and from the time that "Naturalax" appeared on the market manufacturers and distributors were offering approximately 117 different brands by 1930, as indicated by a survey made at that time.

But psyllium seed fell into disrepute for a while. The roughage in the seed proved incompatible with delicate intestines and it is reported to have also caused some trouble in the appendix. The large percentage of mucilage in the cortex of the psyllium seed made this commodity a very likely natural vegetable laxative. However, if not enough water was taken with the seed it had a tendency to form into a hard mass which caused constipation rather than relieving it. The end result of these developments was that psyllium seed rapidly lost out in favor of the old stand-by advertised laxatives. In 1934 imports amounted to only 1,645,384 pounds compared with 4,627,780 pounds in the previous year.

It was just at this time that a prominent Pharmaceutical Company completed their research with psyllium seed and offered, in a compound, the active mucilaginous constituent of the seed. This was extracted from the husk or cortex of the seed and the seed itself was discarded. Other leading pharmaceutical houses soon followed with similar products. This changed the whole picture with the result that today psyllium seed is once again among the leading botanical imports. During the first seven months of 1948 the United States imported 2,588,894 pounds of psyllium seed or almost half as much as the total imports of 2,987,982 pounds during the entire year of 1947. These are Department of Commerce figures which do not indicate what percentage of the total amount is seed and what percentage is husk. By far the larger percentage of imports today is husk which is currently selling in the spot market at a price range of from 45c to 55c per pound as to quality.

The following record of imports well indicates the

importance of psyllium seed as an import commodity.

Psyllium Seed Imports

	Pounds	$ Value
1933	4,627,780	259,708
1934	1,645,384	106,142
1935	2,158,387	130,128
1936	3,092,140	207,498
1937	3,185,066	314,369
1938	2,636,361	276,829
1939	2,183,742	199,823
1940	2,437,875	262,950
1941	2,535,456	353,368
1942	3,176,690	519,870
1943	1,045,489	244,190
1944	1,171,831	254,997
1945	1,485,013	366,015
1946	2,233,324	708,771
1947	2,987,982	1,653,747
1948 (7 mos.)	2,588,894	1,271,191

This, however, is not the only change which has taken place in the psyllium seed market. The southeastern part of France was formerly the most important world source of supply for psyllium seed. The expansion of psyllium seed production in India, where it can be grown more cheaply, and the consequent curtailing of production in France, has resulted in that country becoming second in importance to India as a producer.

During 1934 France supplied over 75 percent of all the psyllium seed imported by the United States. During 1935, of the total of 2,158,375 pounds imported by the United States, it is estimated that France supplied only about 40 per cent and that the remainder was received almost entirely from India. This trend is now complete with French production practically at a standstill. In 1947 importations of French psyllium seed into the United States amounted to only 23,932 pounds, as compared with 2,964,050 pounds from India, the only other nation to supply psyllium seed to this market last year.

Strange as it may seem psyllium seed has been in use in India for many centuries, and indications in its use include many conditions other than constipation. It grows wild in parts of North Gujerat, its cultivation on a commercial scale being confined to irrigated lands in the Mehsana District of Baroda State.

A report in "World Trade Notes On Chemicals and Allied Products" Mar. 13, 1937, states that the husk of the psyllium seed is seldom removed. However, some firms in the Punjab do make a practice of removing the husk in order to supply the demands of exporters. The husk is passed through sieves and packed in bags of 80 pounds net. Although small quantities of psyllium husk are sold in the Punjab for domestic consumption, the greater part of this product is exported to the United States from Karachi.

Now that there is little demand for psyllium seed in the United States for consumption in the whole seed form, the greater percentage of imports is the husk. Since it takes four pounds of psyllium seed to make one pound of husk, the milling is naturally done in India. Some American importers feel that they would like to see this crop produced in the United States.

Experimental work toward this end has been under way for the past two and one-half years. Domestic experiments have been carried out in the Western States and Arizona has thus far proved to be the most logical location for growing the plants. A sandy soil, well fertilized, is necessary with an ample supply of water available just before harvesting time. Experimental plantings have been successful in producing 650 pounds of seed to the acre. This compares with a yield of 1500 pounds to the acre in India. Efforts in this experimental work by several agricultural colleges is now directed not only toward increasing the yield of seed per acre, but by crossing various select species of psyllium it is hoped that a larger seed will be developed. It will most likely take from four to five years of additional experimental work before it is possible to judge whether or not the production of psyllium seed in the United States is commercially practical.

As advantageous as such a development is likely to prove from a basis of self sufficiency, quality control, etc., it must be frankly admitted that the economics in such a project are the greatest problem. The United States with its high labor costs has never been able to compete in producing products such as psyllium seed when confronted with the low labor costs prevailing in a country such as India. During the war, considerable interest was aroused, and many enterprises were undertaken, with the idea of producing medicinal botanicals shut off from importation. However, the one paramount fact to emerge from all these experiments was that it is practically impossible to produce a comparatively small and a highly specialized crop in competition with primative primary markets.

COSMETICS Functions and Formulations

DEODORANT AND ANTI-PERSPIRANT PREPARATIONS Part I

By HARRY HILFER

DEODORANT preparations may be divided into two categories consisting of preparations which function because of their ability to check the perspiration flow and others which inhibit the formation of odoriferous by-products of bacterial action on perspiration. The physiological explanations of the cause of perspiration odors and means of checking them have been treated at great length in the literature and certainly an up-to-date resume of the work done in this field has recently been written by Dr. E. G. Klarmann, to which there is little that could be added at the present time. The writer is therefore limiting the scope of this paper to methods of formulation of the different types of preparations and to show how they function in a broad general way as odor inhibitors.

The causes of odors associated with perspiration have been established as due to odoriferous compounds formed by bacterial activity on perspiration. The two obvious methods of counteracting the formation of these objectionable compounds would therefore be to treat the field with a bactericidal substance which would kill the organism which is responsible for their formation or to check the flow of perspiration so that the bacteria would have nothing to work on.

There are now available on the market preparations which function in either of the two ways mentioned as well as others which have incorporated in them agencies which are capable of exercising both of these functions. These preparations are available as liquid solutions, mobile emulsions, cream emulsions and as ointments. The formula suggested by the U.S.P. is a solution of aluminum chloride in water with a small addition of free hydrochloric acid to prevent hydrolysis and therefore clouding in solution of the aluminum chloride. Aluminum salts in general are good protein precipitants and the greater the ionization of the aluminum salt the greater would be the precipitation taking place. Its activity as a perspiration inhibitor is due to its ability to precipitate the proteins on the skin's surface and thus block the ducts permitting the perspiration to reach the skin's surface. Of the different aluminum salts which may be used to achieve this function, the chloride is the most effective because of the greater concentration of aluminum ions possible with the chloride as against other aluminum salts. Aluminum chloride in aqueous solution however has the lowest pH of the possible aluminum salts and therefore has certain deficiencies. The lower the pH of the preparation, the greater would be the possible irritation to the skin as well as the damage it may cause to fabrics with which it may come in contact. The American Laundry Institute and Good Housekeeping magazine have both developed testing methods for the effects of these preparations on fabrics to which the reader is referred. In addition to the damaging effects on fabrics, there are some authorities who believe the chloride ion as such has a greater tendency towards irritation than does the sulfate, for example, and for that reason most of the antiperspirants on the market confine themselves to the use of the sulfate. Aluminum sulfate does not have as high an ionization constant as does the chloride and it is therefore not as active a perspiration inhibitor. Its solution possesses a higher pH and therefore would not be as likely to irritate or damage fabrics as would the chloride.

Aluminum acetate and aluminum formate have also been and in some cases still are in use, but they do not possess the required perspirant inhibiting properties to compare favorably with the sulfate. The acetate also is very likely to have a marked acetic acid odor which

would interfere with the aesthetic properties these preparations should possess.

Other compounds are used in conjunction with the aluminum salts to exercise a possible buffering effect on the acid ions produced on hydrolysis. Among others urea seems to be the most effective—all things being considered. This is particularly true in the emulsion preparations. Urea is soluble in water in almost all proportions. It contains two (NH_2) groupings which are weakly anionic and capable of reacting with free strong acids and therefore neturalizing them, and will not (because they are amidic groupings) react with the salts in the same manner as would alkalies to precipitate the aluminum. The addition of urea does not raise the pH to a precipitating range, unless added under conditions which will cause it to hydrolyze to ammonia and therefore cause precipitation because of too high a pH due to its presence. In a compound of relatively low molecular weight, there is present as great a percentage of acid fixing groupings as there are in ammonium hydroxides, except that neutralization takes place at a pH sufficiently low to insure continued solution of the aluminum salts. The optimum pH, insofar as perspiration inhibition without too great fabric destruction is concerned, seems to be about pH 3. Higher pH's seem to markedly lower perspiration inhibition.

It might be well to mention at this point that there is a patent covering the use of urea in antiperspirant preparations, which has been upheld by the courts and therefore makes its use without proper permission by the holders of the patent, subject to litigation. Other means of buffering are therefore being used, with varying degrees of success. There is no implication being made that these other methods are not as effective as is the use of urea. Indeed, at least one manufacturer who definitely has established his right to use urea if he chooses, believes his method to be superior. Urea was mentioned first because it is actually the first effective buffer of record in antiperspirants.

Another means of buffering has been by pH control and by the introduction of agents which react with the acid of hydrolysis and in some measure neutralize it. The pH can be fixed at any point up to the precipitation point of aluminum by this means. Among other agents which may be used are zinc oxides and aluminum hydroxides as well as some of the aluminum orthophosphates. In addition there is now available a material called by its manufacturer aluminum chlorhydrate which is a soluble complex of aluminum hydroxide and aluminum chloride. Another means of accomplishing the same results is by partial neutralization of the aluminum chloride or sulfate with an alkali such as sodium hydroxide or triethanolamine. However as previously stated, the introduction of these agents measurably retards the perspiration inhibition characteristic of the final product. As far as fabric damage inhibition is concerned, these are also difficulties inherent with these preparations insofar as this function is concerned.

Miss Ruth Bien of the *Good Housekeeping* magazine showed that there is in many cases a separation of the aqueous phase of emulsion systems containing aluminum salts after application in which there is a much lower pH than is obtained in the cream itself. Such creams cause greater fabric destruction than would be expected from the pH of the cream itself. There is good evidence to believe that the metallic portion of the salt may be fixed by the lipoid phase, thus explaining the high pH of the aqueous phase. In the writer's own experience, he has run into this phenomenon and has found that the use of urea is a better control on the pH of the aqueous phase of such an emulsion and has found that its use is more effective against fabric damage. The fact that solutions of these salts fixed to the same pH as the emulsion, behave as they would be expected to is further evidence that such a cleavage takes place.

Apparently the great solubility of urea in the aqueous phase will permit it to migrate with the offending hydrogen ions and act as a deterrent on their activity.

A method of effectively counteracting this tendency would be to make an emulsion sufficiently stable so that such a separation would not take place. On the other hand it has generally been accepted by most workers in the field that the stronger the emulsion, the less would be the perspiration inhibiting tendency. The formulator is therefore forced to choose a point somewhere between these two unacceptable extremes and hope to arrive at a mean which is a good compromise.

All buffers affect adversely the inhibition of perspiration, including the urea. Their use is a compromise which would allow effective perspiration checking to take place, though not as effective as without their use, and at the same time act as a brake against irritation to the skin and fabric destruction. The emulsions in which antiperspirants are used present problems not encountered when they are used as aqueous solutions, and therefore it cannot be assumed that if a solution of salts and buffers function correctly, that an emulsion made with the same salts and buffers will function as well.

As far as the formulation of antiperspirant preparations is concerned, glyceryl monostearate has been generally adopted as the best agent for the emulsion, in connection with any of a number of acid stable emulsifiers such as sodium lauryl sulfate, sodium cetyl sulfate, nonionic emulsifiers and several of the cationic emulsifiers such as quaternary ammonium salts. These latter are coming into increasingly greater popularity because of their ability to exercise a bactericidal function as well. The amount of the emulsifier used acts as a control of final consistency of the cream as well as its emulsion function—generally speaking the greater the concentration of the emulsifying agent, the softer would be the final consistency. The amount of glyceryl monostearate used varies up to 20 per cent, most manufacturers using about 15 per cent. Other materials

(*Continued on page 683*)

BETTMANN ARCHIVE

EXPANDING ROLE OF VITAMIN K

By M. A. LESSER

IN 1943 a Nobel prize was awarded to Henrik Dam and Edward A. Doisy for their fundamental studies on the chemical nature of vitamin K. By that time—less than a decade after its discovery—the coagulation vitamin had already attained major importance in the prevention and treatment of various hemorrhagic conditions. Since 1943, vitamin K has found other important uses in medicine.

Vitamin K was discovered and named by Dam in 1935 when he observed in newly hatched chicks a fatal hemorrhagic tendency which could be cured or prevented by the administration of a nonsaponifiable, nonsterol fraction of hog liver or alfalfa. Later it was observed that the delayed clotting time of the blood was due to a low prothrombin level[1].

The work of Doisy showed that there are at least

two naturally occurring substances which have similar physiologic properties with respect to blood coagulation. They were referred to as vitamin K_1, and vitamin K_2. Both were also found to possess a naphthaquinone nucleus. Thus, vitamin K, isolated from alfalfa, was found to be 2-methyl-3-phytyl-1,4-naphthaquinone. Vitamin K_2, obtained from putrified fish meal, is chemically 2, 3-difarnesyl-1, 4-naphthaquinone.

Subsequently a number of naphthaquinone derivatives were synthesized. These produce a wide range of vitamin K activity, some being more potent than the natural forms and some of them being water-soluble. Undoubtedly the most important of the synthetics is vitamin K_3 (chemically 2-methyl-1, 4-naphthaquinone); more commonly known as menadione. During recent months, new attention has been focused on vitamin K_5 (2-methyl-4-amino naphthol hydrochloride) because of its potentialities in fields other than hemorrhage control.

The official vitamin K preparation is menadione U. S. P. It is practically insoluble in water. Like the natural fat-soluble forms, menadione is soluble in oils. Hence when there is a bile deficiency, oral administration of the compound should be supplemented by the administration of bile salts. Menadione sodium bisulfite U. S. P. is a water-soluble derivative of menadione that can be used both orally and by injection in the treatment or prevention of primary or secondary deficiency of vitamin K. However, approximately twice the amount of menadione bisulfite is required to supply an equivalent amount of menadione.

A number of other preparations of vitamin K, chiefly water-soluble forms, are available commercially for oral or parenteral use. Some of these products are covered by patents.[2,3] The main advantage of the water-soluble forms is that they can be given orally without adjuvant bile salt medication. These modifications are especially valuable when fat absorption is markedly reduced. In contrast to oil solutions, aqueous preparations are more rapidly absorbed and utilized after parenteral administration.

As remarked by Shapiro,[4] it is important to remember that the various vitamin K compounds on the market do not exhibit the same vitamin K activity and that doses must be adjusted accordingly. He feels that all vitamin K compounds should be compared with menadione on a molecular and not on a weight basis. For the sake of uniformity and simplicity he suggests the use of a basis of biological vitamin K units.

As is the case with other vitamins, says Gyorgy,[5] there is a tendency to use too large doses of vitamin K when smaller doses would assure the same satisfactory result. Although Rafsky[6] stated that vitamin K therapy may be attended with danger in certain types of cases, amounts many times the regular dose have been administered for considerable periods with insignificant toxic reactions.[7,8,9] No toxic symptoms have been noted from tremendous doses of natural vitamin K. Some anemia and general depression of the hematopoietic system has been associated with the use of very large doses of synthetic products, including menadione. However, as remarked by D'Alessandro,[10] the therapeutic ratio is so very high that one may use it without hesitation in the recommended doses.

He also points out that the average human diet contains adequate amounts of vitamin K for normal requirements if it can be absorbed and utilized. Rich natural sources include spinach, kale, cabbage, egg yolk, rice bran, tomatoes, casein, alfalfa, carrot tops, soy bean oil and hog and beef liver. The vitamin is also obtainable from chestnut leaves, oat shoots, hemp seed and putrified fish meal. This vitamin appears to be synthesized by certain bacteria, including *Bacillus coli*, *Bacillus tuberculosis* and *Staphylococcus aureus*.

In contrast to other vitamins the most frequent cause of vitamin K deficiency is faulty absorption rather than insufficient intake. Aside from lack of vitamin K in the diet, a vitamin K deficiency state may result from, (a) absence of bile salts from the intestinal tract; (b) grossly deficient absorptive surface of the intestinal tract, (c) marked liver damage and (d) severe and repeated hemorrhage.[10]

Vitamin K is essential for the production of prothrombin. This, in turn, is the precursor of thrombin, which is necessary in the blood-coagulating mechanism. Synthesis of prothrombin by the liver does not occur unless vitamin K is available. Hence the predisposition to hemorrhage characterestic of vitamin K deficiency is based on a low prothrombin level in the blood. Such a hypoprothrombinemia may be determined simply and satisfactorily by a number of methods; perhaps the best known being that of Quick.[11]

Aside from newer therapeutic uses, many of which require further study, vitamin K, including the natural and synthetic forms, has a number of well established indications. It apparently has a specific effect on the prothrombin deficiency occurring under certain circumstances. These include comparatively rare cases of primary dietary deficiency of the vitamin, obstructive jaundice, hemorrhagic states associated with primary hepatic disease, hemorrhagic tendencies which are present in certain intestinal diseases, and the hypoprothrombinemia of the newborn.

In newborn infants an inadequate supply of vitamin K from the mother and the absence of intestinal bacteria are believed to be the reasons for the physiologic prothrombin deficiency which exists during the first week of life. As already mentioned, it is a well known fact that vitamin K is produced by bacterial action. Hence it follows that as soon as a baby ingests food or water, it infects its intestinal canal which is sterile at birth. With the establishment of an intestinal flora the synthesis of vitamin K begins, thus producing a rise in prothrombin after the first week of life. This explanation also helps to account for the observation that hemorrhagic disease is much more common in infants born in large hospitals, where the feedings are prepared according to the most sanitary methods, than in babies born at home.[10]

This explanation also provides the reason for pre-

venting vitamin K deficiency during the crucial first few days of life. It is fortunate that the vitamin or its analogues seem to be specific in the treatment of the physioloc hypoprothrombinemia of the newborn. It seems now to be quite well established that the administration of vitamin K to a woman during labor insures that the newborn infant will have a normal amount of prothrombin in the circulating blood. Similar doses may also be given to the newborn baby and will produce the same effect.[7,13-16] Parenteral administration is a common method for supplying the vitamin and thereby reducing the incidence and severity of hemorrhages in the babies.

Indicative of the benefits of vitamin K are the reports of Pray and his associates.[17,18] They found that treatment of expectant mothers with menadione during the last days of pregnancy or during labor virtually eliminated the hypoprothrombinemia and tendency toward pathologic bleeding as a result of hemorrhagic disease which otherwise may occur during the neonatal period.

Also indicative were the findings of Waddell and Whitehead.[19] They reported that well over 4,000 infants born at the University of Virginia Hospital had received vitamin K as a prophylactic measure with the result that hemorrhagic disease has disappeared from the nurseries of this hospital. Since the routine use of vitamin K it has not been necessary to give a single transfusion in the nurseries to control bleeding or to make up for extensive blood loss from frank hemorrhage. In their opinion, the routine use of vitamin K has proved a most valuable nursery adjunct.

Very much to the point is the conclusion reached by Reich and his coworkers.[20] On the basis of their observations they believe that "vitamin K injected into the mother before delivery or into the infant immediately after birth is the best prevention for hemorrhagic disease of the newborn."

From such statements it becomes apparent why the administration of vitamin K has become a routine measure in many hospitals and with many physicians.[1] However, there are several investigators[21,22] who question the advisability of such routine administration. For example, Potter's[23] data led her to the conclusion that no decrease in infant or fetal mortality can be expected to result from the routine administration of vitamin K to all women during labor. Nonetheless, because of favorable personal observations, because of the many concurring reports in the literature, because of frequent dietary deficiencies, and because of other factors, there are many who are continuing the routine administration of vitamin K to mothers and newborn infants.

It has been found that vitamin K has an extraordinary protective effect against hemorrhages in obstructive jaundice. It is similarly useful, but not to the same extent, in controlling bleeding associated with primary hepatic disease.[1]

The value of vitamin K in such disorders has been well indicated by Barker.[24] He stated that recognition of the etiologic role of vitamin K deficiency in the hemorrhagic diathesis so common in patients with jaundice or severe liver damage is one of the most important contributions of medical knowledge within the last decade. This hemorrhagic tendency has been shown to be due to lowered plasma prothrombin. This, in turn, results from the inadequate absorption of vitamin K, failure of the severely damaged liver to utilize the vitamin to form prothrombin, or a combination of these two conditions. The failure of the jaundiced patients to absorb vitamin K may be controlled by the conjunct oral administration of bile salts or the parenteral administration of a vitamin K preparation. If the liver is so severely damaged that it cannot produce prothrombin despite an adequate supply of vitamin K, bleeding will not be influenced by either of these methods of administering the vitamin and the prognosis becomes extremely grave. Under such conditions, blood transfusions are indicated to supply prothrombin directly.

Giving vitamin K has proved its value as a prophylactic measure in jaundiced patients about to undergo surgery. From France comes a report[25] that there was not a single death from a postoperative hemorrhage during a three-year period in which 225 biliary tract patients with hemorrhagic tendencies were treated with vitamin K by mouth and by subcutaneous injection. Vitamin K therapy has also been found[26] of great clinical value in cases of external biliary fistula and of long standing duodenal drainage. In these cases the vitamin K deficiency is due to the same factors found in patients with obstructive jaundice. Cheney[27] has found that the vitamin is helpful in cases of hypoprothrombinemia associated with acute or severe hepatitis, acute yellow atrophy of the liver and yellow fever.

As shown by a number of reports,[28,29,30] vitamin K can also be applied effectively to the differential diagnosis of jaundice. The tests are made by means of vitamin K injections. If the prothrombin level rises to normal or nearly normal values, this is regarded as presumptive evidence of obstructive jaundice. Lack of satisfactory response indicates intrahepatic jaundice or parenchymatous disease of the liver. Recently, Unger and Shapiro[31] reported the development of a standardized vitamin K tolerance test for determining hepatic function.

Vitamin K also acts in a specific manner in the hemorrhagic states which exist in connection with certain intestinal diseases such as ulcerative colitis, sprue and celiac disease. These conditions are characterized by either a loss of continuity of the intestinal tract or by a disturbance of its absorptive surface. In these[1,32,33] and certain other gastrointestinal disorders,[26,34] including epidemic diarrhea of the newborn,[35,36] the administration of vitamin K often produces excellent control of the bleeding tendency.[37]

Of growing importance is the use of vitamin K to combat the tendency of certain drugs to depress the prothrombin level of the blood. Prominent among

such agents are salicylates, barbiturates, sulfonamides and antimalarial drugs, especially when they are given in large doses over prolonged periods. In producing hypoprothrombinemia, these drugs apparently may act in one of three ways: (a) by inhibiting the action of the intestinal bacteria which normally synthesize vitamin K in the intestinal tract; (b) by substituting for or competing with the vitamin in some of the metabolic processes; or (c) by causing damage to the liver so that vitamin K is not properly utilized for the formation of prothrombin.[38]

The wide and common use of salicylates, especially acetyl salicylic acid, undoubtedly make these the most important compounds of the group. Hence conjunct vitamin K administration is frequently recommended[39–42] when these drugs are given in the treatment of arthritis, rheumatic fever and other chronic infectious diseases. It is similarly advocated when aspirin or other salicylate is prescribed to alleviate pain and discomfort following tonsillectomy[43,44] or tooth extraction.[45,46]

Studies made by Shapiro[47] indicate that approximately 1 mg. of menadione will counteract the prothrombinemia-inducing action of 1 Gm. of acetylsalicylic acid. When factors such as fever, toxemia and limited nutritional intake complicate the situation, he suggests that adjuvants such as ascorbic acid might be also needed. On the basis of such findings, one pharmaceutical manufacturer has made available a so-called "protective" salicylate product. Each tablet of this preparation ("Menacyl") contains:

Acetylsalicylic acid	**0.33 Gm.**
Menadione	**0.33 mg.**
Ascorbic acid	**33.30 mg.**

Large doses of barbiturates may cause a lowering of the prothrombin level. Since barbiturates are extensively used for inducing analgesia during labor and delivery, these drugs may be important as causal factors in the hemorrhagic diathesis of the newborn. Hence this condition may be relieved by the administration of vitamin K to the mother during labor.[48,49]

Because of their antibacterial action, certain sulfonamides can destroy the organisms which synthesize vitamin K in the intestines; thereby causing a deficiency.[50] In such cases the conjunct administration of vitamin K is definitely indicated.[32,51,52] On occasion, quinine will cause hypoprothrombinemia and vitamin K is advocated[53] to combat it.

The anticoagulant drug, dicumarol, has found important uses in modern medicine.[54] However, it has the serious disadvantage of lack of adequate control. Because of this, a number of workers have studied the problem with respect to the usefulness of vitamin K to control the undesired dicumarol action. For example, Davidson and his associates[55,56] found that large doses of vitamin K_1 oxide either prevented or reversed the hypoprothrombinemia produced by dicumarol. Other clinicians[57] recommended the intravenous use of vitamin K in dicoumarol-induced hypoprothrombinemia as a safety measure.

Bleeding caused by dicumarol often may be controlled by blood transfusion, but Parsons[58] feels that the use of vitamin K is probably a speedier and more effective way of combating this undesired action. Thorsen[59] used a combination of blood transfusions and vitamin K to control a case of accidental dicumarol poisoning. However, others[60,61] have not been so fortunate; vitamin K treatment being of no avail in several cases of severe dicumarol poisoning.

Vitamin K therapy is finding useful application in other hemorrhagic syndromes. Russian workers[62] have made a trial of this material in the treatment of bleeding in women, especially in cases where there was no response to the usual therapy. They observe striking effects, not only in climateric or dysmenorrheic bleeding but also in metrorrhagia provoked by tumors. Vitamin K therapy was found to be one of the most efficacious measures in metrorrhagia and menorrhagia.

Of related interest are the finding of Gubuer and Ungerleider.[63] They reported that of 43 cases with menorrhagia treated with vitamin K significant shortening of the menstrual flow occurred in two-thirds of the cases where menses were prolonged beyond five days. Not only was the flow less profuse in these cases, but its character was altered in many instances. Clots were reduced or disappeared in the majority of cases.

Combinations of vitamin K and ascorbic acid have proved effective in the treatment of epistaxis or nasal hemorrhage. In patients with frequent nosebleeds, Neivert, Engelberg and Pirk[64] found that a large percentage showed low vitamin C blood levels and low prothrombin time. Among those who benefited from the combined vitamins C and K treatment were several hypertensive patients. Noteworthy in connection with this last observation are studies[65] which suggest that vitamin K may be useful in some cases of hypertension. However this is not borne out by more recent investigations[66] with vitamin K-like substances.

In direct opposition to those who use the anticoagulant drugs (dicumarol and heparin) for the therapy of acute coronary thrombosis are the findings by Doles[67] that vitamin K is very useful in the alleviation of pain and the prevention of recurrent attacks of this condition. Of 55 patients with acute cornonary occlusions who were adequately treated with vitamin K, only two died; a mortality rate of 3.6 per cent. Of the 53 patients who recovered, 52 have been able to pursue their original occupations. The other, formerly a truck driver, found it necessary to seek lighter clerical work.

The often severe pain was controlled by vitamin K, even when little effect was obtained from morphine. It is noted by Doles that since the pain can be controlled by vitamin K, which in turn controls hypoprothrombinemia, it would seem that hemorrhage within the wall of the coronary artery could be the underlying

(Continued on page 680)

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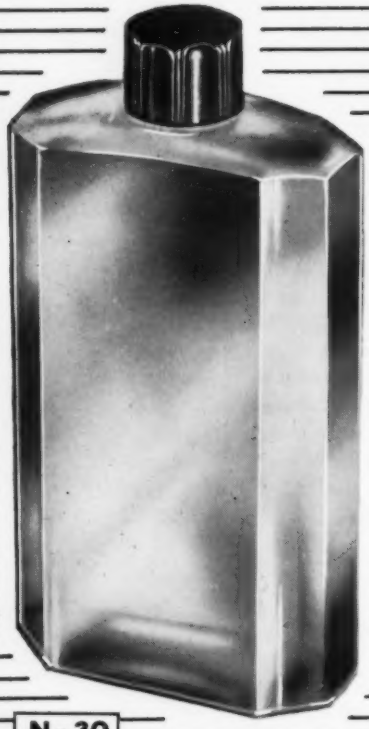

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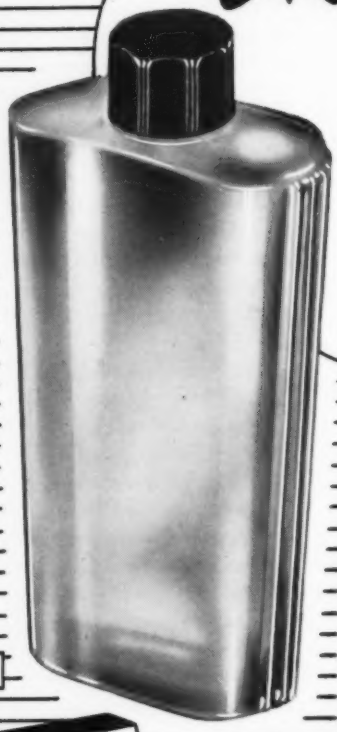

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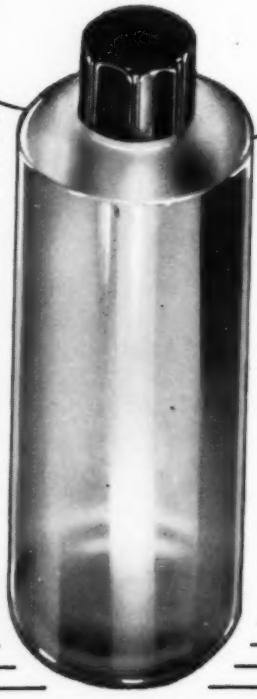

L-33

C-39

Here's the short cut to smart packaging—an artistically designed Swindell stock bottle plus your distinctive label.

Shown here are four of the many stock bottles available for quick delivery in popular sizes ranging from 1/8 ounce to 16 ounces.

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200 FIFTH AVENUE, NEW YORK
ROBERTO ORTIZ, HAVANA, CUBA

When you think of bottles think of

Swindell

PACKAGING and SELLING

HOW NOT TO BUY

THERE is a leading cosmetic company whose long established policy for purchasing has been a great source of frustration for supply salesmen. This company has elected to expose itself to all developments in the supply world on one morning of each month. On this morning a crowd of supply salesmen gather in a reception room and one by one, as their turn comes, they are beckoned to a small ante-room very much in the way that a busy doctor receives his patients, given from five to ten minutes time, and then ushered out another door so that the way is cleared for the next salesman.

This method of buying has not been totally without some compensation to the salesmen. The monthly gathering is known by various names, such as "The L. A. Sporting Club" and it has been said that frequently when a salesman has nothing particular to offer the company, he still finds the pleasures of this social occasion, in the one to two hour wait in the leisure company of other salesmen, a sufficient reason for his presence.

This particular company is supremely successful, so perhaps its own personal idiosyncrasies in organizing the purchasing department in this fashion should not be criticized. In fact it must be the conclusion of any one who has been in intimate contact with business for over 25 years and in a position to view, in an objective way, departmental functions such as purchasing, production, sales, administration, etc. that the purchasing policy of most companies is based upon less understanding of its functional value than that of any other department.

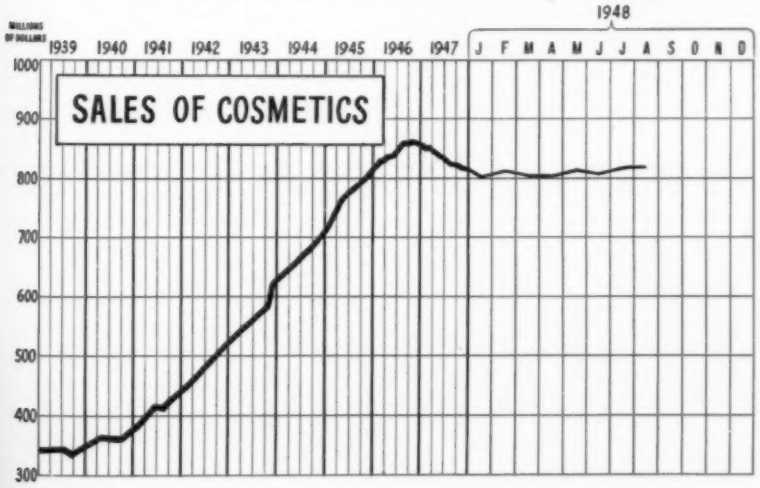
It is true that in most companies the purchasing agent is under continual pressure to demonstrate that he has purchased at the lowest possible price, and in some products that he purchased at the right time, and in some companies that he purchased from a reliable supplier. Beyond that, in the large majority of companies, there seems to be very little executive concern with the purchasing department or purchasing policy.

It would be accepted as a rather startling and undoubtedly absurd statement if anyone were to say that the purchasing department may easily be made the most important and the most productive department in the business, and that on very many occasions the purchasing function, if not the department, has contributed far more to the growth of the business than anything contributed, for instance, by sales and advertising. Since it is very difficult to consider any department in the business as a separate sealed off department and assign to it the entire or major share for a business's success, this statement is rather difficult to prove. And yet an observation of business successes over a long period of years continually emphasizes the large element of truth that can be contained in such a statement.

Sales and advertising, administration and production function properly and economically when the product of the company has some distinct virtue or advantage. There hardly could be published a directory big enough, to list only the brands that have appeared in this industry, that have had every facility of sales and advertising, but have passed from the scene because they lacked some inner merit which established a worthwhile quality in the unconscious but critical judgement of the public. And yet, on the other hand, there are many products frequently initiated by small companies which showed spontaneous energy because of public approval and which permitted sales and advertising to force this product into rapid and sustained volume.

What is the source of many of the new ideas which are the foundation of these approved products? These ideas may be a package or the detail of a package; they may be a new chemical or material which suggests a product; they may be the variation of a product which suggests a new and fertile market, or countless other suggestions pointing to something new with a potential which the sales department can quickly develop.

Retail sales of cosmetics for the twelve months ended with August 1948 amounted to $819,787,000. This compares with $818,412,000 for the twelve months ended with July 1948 and with $835,146,000 for the twelve months ended with August 1947.



In one branch of this industry, that is the ethical pharmaceutical, the very large investment in research and the complicated and highly technical quality of the research needed to produce new products sets this part of the trade in the unique position of sustaining itself in new ideas. But aside from this limited group and over all the rest of the industry, particularly in proprietary medicines and even more so in cosmetics, observation as well as the factual record shows that the vast majority of new creative research has been done by the supply companies.

All of this new creative work in packaging, in equipment, in chemicals, in new uses for raw materials, in perfuming and in many other ways, is the contribution that a supply salesman can make to a good customer. In addition to this research and development work of the supply company, the topnotch supply salesman is usually a thoroughly competent man, not only in the use and application of his own products, but of the entire part of the industry, that is packaging or equipment, in which he works. He is normally, in addition to this, thoroughly and intimately acquainted, through close association with very many companies, with the technical and marketing problems of his customers. This combination of an alert competent man, thoroughly versed in the problems of his field and a supply company engaged in original creative research in its own products has provided far more new ideas that are the foundation of successful products and successful businesses than have originated within the customer companies.

From this viewpoint it would seem that more companies would look upon their purchasing department as their point of contact for the greatest source of new ideas open and possibly available to them. One would think that the chief responsibility of the purchasing department would be to e s t a b l i s h friendly but business-like relations with leading supply salesmen of the progressive research-minded supply houses, and that the department would freely expose itself to anyone who takes the trouble to push the doorbell. Certainly if the executives of many companies had ever been in a position where they could have seen just how their competitor actually procured the new product which built that company into a substantial business institution, they would radically change their whole administrative attitude toward purchasing.

Changing a Fifty Year Old Package

It takes quite a bit of courage to recognize that a package that has had consumer acceptance for over 50 years has passed its day of usefullness. There have been a number of cases in this industry where a decision of this sort has faced management and yet in every case, so far as we know, where the package has been modernized, either from the viewpoint of utility, or in design, or color treatment to add shelf appeal, the consumer has accepted this modernization, and the results in sales have been more than satisfactory.

Just recently the Godefroy Manufacturing Company of St. Louis, Mo. repackaged Larieuse Hair Coloring in a program of consumer education which extended over a period of more than 12 months. Larieuse is one of the pioneer hair colorings and has long been an excellent seller. The original package, which may well now take its place with early American packages, has been familiar to the trade for over 50 years.

Starting in August 1947 every Larieuse box of the old design included a small single-sheet insertion which told the users that the product would soon appear in a new package. Copy on one side of this insertion stressed the fact that while the package would be changed, Larieuse would remain the same top quality product they had always known. Copy on the reverse side pointed out that the price of Larieuse remained unchanged. Three months later, the color of the old package was changed from bright red to the strawberry-pink of the new box. In February 1948 a different insert was included in the package, printed in two colors and headed "You'll See It . . . SOON." It featured a color photograph of the new package, repeating the assurance that Larieuse quality would remain unchanged. At the same time the label on the bottle was changed to conform to the design of the new package.

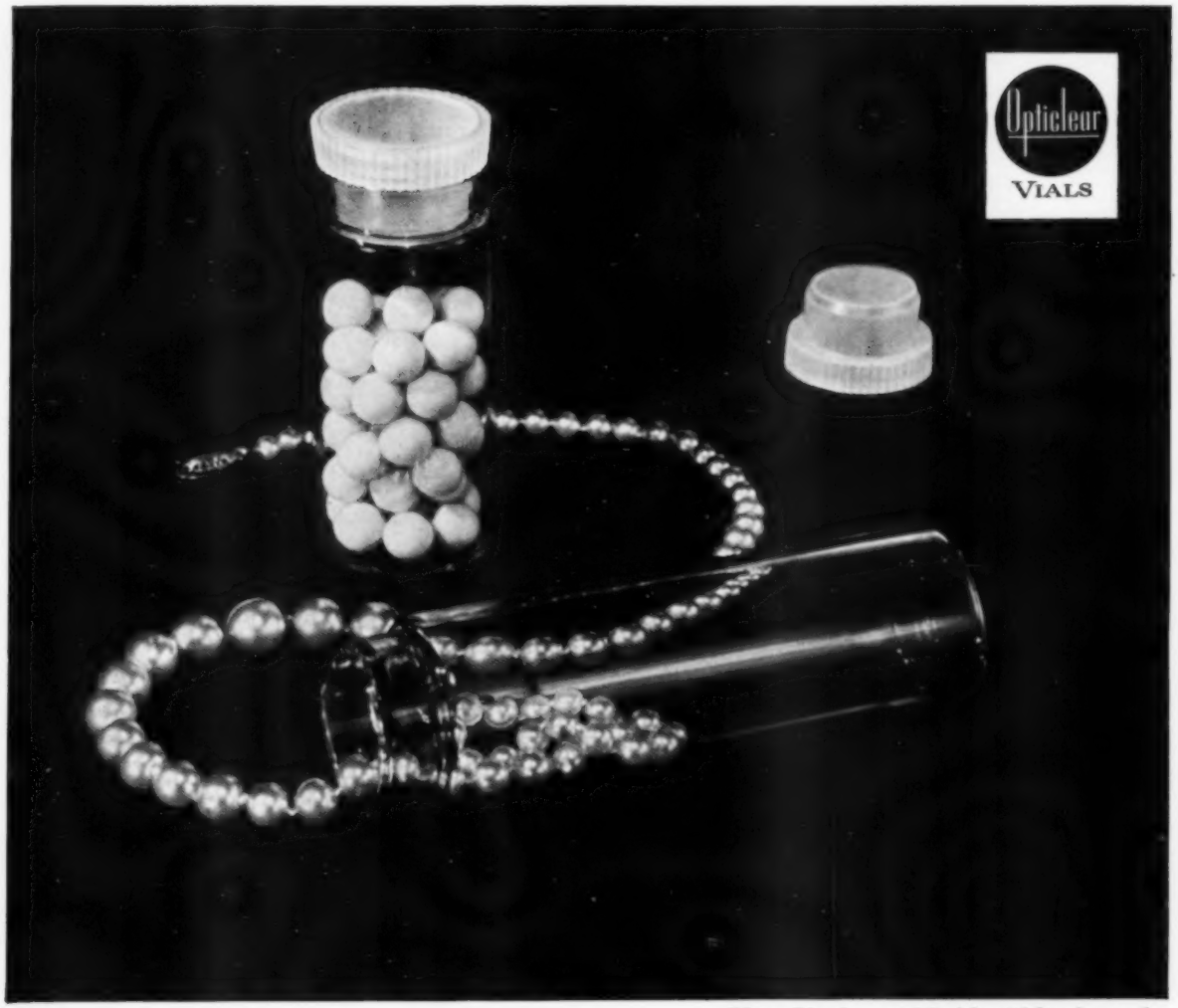
Larieuse Hair Coloring packaged in its "new look."

A month later boxes of the new design were tried out in test areas of seven states. This new package included a small insertion headed, "This Is It," and told consumers that this was the new package they had been promised with absolutely no change in the product and added "WE HOPE YOU LIKE IT."

Following a test of five months in which no unfavorable consumer reaction was observed, the Godefroy Company began distributing nationally in August, the new Larieuse package.

In making a radical change of a long established package, there seems to be two general schools of thought. One school believes in making the full change immediately with a dramatic introduction and campaign, getting everything over and out of the way in one step. These people believe that a dramatic presentation of this sort commands more public interest and registers the change to a wider audience. They also believe that it eliminates a great deal of uncertainty and confusion.

There are just as many people who believe that when the retailer and the public have become accustomed to identifying a product through an individualistic package over a period of many years that a sudden change may cause too much confusion and too great a loss of confidence by the public, or that many regular users may fail to identify the product and become so annoyed that their patronage is lost. These people believe in a gradual transition, and in some cases this transition has extended over a period of several years, with very slight changes in the label form, in the form of the label, and in the color used for the package. These gradual changes may be as much as six months apart and may include six, or as much as 12 gradual changes, to reach the ultimate package.



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Classic Beauty in vial design
with the new positive re-seal

• Here is lustrous, flawless glass in the desirable "ethical" shape, plus a distinctive new translucent stopper . . . combined in an eye-catching container which assures flattering display and ready acceptance of your product.

Here is maximum utility! The straight sides and wide neck simplify filling. The smooth fit of the stopper allows removing and replacing in two easy movements.

Here is the tightest seal against moisture penetration Kimble has ever developed! Even after removing and replacing the resilient stopper many times, its re-sealing ability is so nearly perfect that there is no trace of moisture penetration to the most absorbent of tablets or powders.

You'll want to examine and test Opticlear Vials with your own products. We'll be glad to send you a sample set. Please mention type of product and sizes of vials needed.

SPECIFY KIMBLE FOR ASSURANCE OF CONTAINER QUALITY

KIMBLE GLASS TOLEDO 1, OHIO
Division of Owens-Illinois Glass Company

Economical Ideas for expensive tastes

If cost has held you back from some container ideas that you'd like to put into effect, remember times have changed—

Scovill has some new methods of applying finishes to a variety of materials that greatly widen your possibilities and at prices that will fit your pocketbook.

In fact, you now have better opportunity than ever before to build an entire line around certain design characteristics which will give that "family resemblance".

For example, the design on that vanity—specially embossed, several colors—is carried out in the lipstick. Both effects (formerly prohibitive in cost) are achieved economically.

Another cost-saving item is the *invisible* locking device which prevents spoilage at the counter. The stick won't emerge unless the cap is off.

Have Scovill show you* these—and other ideas—which illustrate some of the reasons why

the majority of the brands in leading stores have

SCOVILL-MADE containers

*Phone or write SCOVILL MANUFACTURING COMPANY,
Drug and Cosmetic Container Division, 62 Mill Street, Waterbury 91, Conn.

It seems to us that the procedure of the Godefroy Company is an excellent method to use for anyone who favors the gradual evolution theory in a package change. In this case, the rather radical change has been telescoped into a period of a year, and the consumer has been kept fully informed of the four basic changes during this period.

Hair Again

It would seem that the branch of the cosmetic industry, that is hair preparations, which has carried the banner for cosmetic sales in the last few years still has the ability to spring a surprise on the industry. This surprise is the new capsule hair preparations which are appearing under different trade names and in different parts of the country.

So far as we know, the first of these preparations to appear is the Insta-Curl of Los Angeles. These people claim to have originated this product and to have developed certain new materials not heretofore used in the cosmetic business, making this new cosmetic innovation possible. Insta-Curl entered the retail trade around the end of August and very quickly built up a record of public response and fantastic sale increases in leading cosmetic stores.

The Insta-Curl package consists of five capsules inserted in an open-faced cellophane covered box, which acts as a picture frame for a counter display. These five capsules in this picture-frame box sell for $1.25 retail. When the contents of one of these capsules is poured into a glass of water, it goes into immediate solution, and if a comb is stirred in this solution and then used to comb the hair, within a very few minutes curly hair begins to appear.

The novelty, the efficiency, and the ease of application of this product, combined with the record of startling momentum of retail sales, very rapidly brought several new companies into the business and they appear to be developing almost daily. At least two of these companies, determined to get quick action and an early position on the crest of this wave, are using daily newspapers for mail-order business.

There seems to be a great deal of uncertainty as to the chemical character of these products. Insta-Curl claims a period of research and development preceding their introduction of this product, and they claim, also, to have clinical test assuring the absolute safety of application. As before stated, they also claim that this product contains chemical or raw materials with no previous history of cosmetic use. They claim, also, that there are certain chemicals long known to the cosmetic industry which do produce these results, but which have not been used because of certain technical objections.

It would appear however that this quick and simplified method of curling hair can take a substantial and legitimate place in the industry because chemical research, by at least one interested party in the trade, has already determined a chemical that will accomplish this purpose, which can be manufactured with comparative ease, and has a demonstrated record of complete harmlessness.

Tax Experts

In a recent column in the New York Tribune, discussing Italy's economic troubles, the writer stated that one of the most serious obstacles to recovery is the number of sales taxes which so increased prices to the consumer that production is held down. Realizing this, the Italian government has invited American tax experts to revise their tax structure, with a view to eliminating these hindrances to expanding consumer purchasing power. This seems to us a very wise move, because certainly no one could have a more extended experience in the way sales or excise taxes stifle consumer purchasing power and decrease production than the American tax expert.

Music and Perfume

Music hath charm to soothe the savage breast, but according to Benson Storfer of Corday, it can also sell perfume. This is the basis of the ambitious perfume promotion now underway for all of Corday's perfumes.

Several months ago Harry Revel, a composer who has had several hits in Hollywood and on Broadway, presented to Benson a score translating the "Scent Chords" of Toujours Moi into music. This so inspired Benson Storfer that he immediately made available to Revel the other Corday fragrances from which emerged this unique suite, entitled "Perfume Set To Music."

Each of these interpretations will appear in a record album offered by R.C.A. Corday and R.C.A.-Victor working together have outlined an aggressive, comprehensive promotion. Each will cooperate on counter and window displays. R.C.A.-Victor will furnish a complete line of displays to promote this album to their 15,000 outlets. A combined publicity campaign has been organized, and both Harry Revel and Benson Storfer will appear on radio and television schedules. Combined with this is an extensive magazine advertising campaign.

Cosmetic Inventories Last Lap

There are many indications that this Christmas season will largely or entirely clean up the deadwood of distressed goods or over-purchased inventories which has so harassed perfume and cosmetic manufacturers.

A large part of the war-born manufacturers who did not have staying power have already passed out of the picture, and to a large extent their merchandise is out of the way. This can be seen most clearly in the men's toiletries field which, with the perfume business, had to the greatest degree a unhealthy expansion in the number of manufacturers.

Over 100 makers of men's toiletries have discontinued their line, and a considerable portion of the business which these people had procured is now beginning to flow to the lines which have proved their capacity for staying in business.

One of the most successful houses in this branch of the trade reports, at this date, an increase of 16 per cent over their peak volume in 1946. Another old line house in men's toiletries is running ahead of 1946, and still another has been assured by a number of retailers that sales this Christmas would considerably exceed those of last year.

Early this summer the buyers of a well-known New Jersey department store were told to get away from their departments and spend at least a month calling personally on each of their important suppliers. They were told to purchase as much as they could of the salesmen's samples and showroom samples that were in excellent condition, if they could get them at an additional discount of 20 per cent or more. It is said that this store spent over $500,000 on merchandise of this kind, materially helping manufacturers to get cash for merchandise that would otherwise be either junked or refinished.

It is said that another department store has devised a plan for moving a large volume of prestige perfumes which have been slow sellers or in which the manufacturer has a top-heavy inventory. This store guarantees to move this merchandise without causing a ripple of dissatisfaction in retail circles

METAL CONTAINERS
and
CLOSURES
by
BRIDGEPORT

Vanities — Powder Boxes

Jar Caps — Perfume Vial Cases and Caps

Bottle Caps — Lip Brushes

Drawn Talc Containers — Dry and Paste Rouge Cases

Lipstick Containers --- Swivel, Slide, Automatic

and

Other Special Metal Products
for the Cosmetic Industry

THE BRIDGEPORT METAL GOODS MFG. CO.
Established in 1909

BRIDGEPORT CONNECTICUT

or without affecting the position of the manufacturer of that product. The plan is to quietly and personally approach large corporations which are in the habit of making Christmas gifts and to offer them this perfume at a substantial discount, providing they keep the price a secret.

The scope and variety of methods used to clear up retail and manufacturers' inventories this year have brought what now seems to be a far better Christmas season than retailers anticipated and gives promise that the industry will begin 1949 with far more optimistic prospects than a year ago.

Department of Commerce Monthly Retail Trade Report

Retail sales of all kinds in drug and department stores showing sales for the month of August 1948 as compared with the same period in 1947.

	Department Stores	*Drug Stores*		*Department Stores*	*Drug Stores*
Atlanta	+13	+5	Milwaukee	+9	+6
Baltimore	+5	+1	Newark	+5	-7
Birmingham	+7	-3	New York	+3	-1
Boston	+7	-1	Philadelphia	+17	-1
Chicago	+14	-3	Pittsburgh	+17	-4
Cincinnati	*X*	-3	Salt Lake City	-2	+1
Cleveland	+12	+1	St. Louis	+14	+6
Dallas	+15	+2	San Francisco	+3	-12
Detroit	+7	+2	Seattle	+6	-4
Los Angeles	+6	-8			

Oyez! Oyez!

The fact that five lawyers have recently joined the cosmetic industry in an executive or ownership capacity may lead to mild speculation. It could even cause some business men to wonder whether they have advised their sons wisely in the selection of an education.

Of course, it could be that these lawyers, who have in each case built a successful practice, have discovered at this late date that they are really business men and were first lawyers by force of circumstances. As one of them remarked, "I never realized how dull the law is until I got in the cosmetic business."

Still, there are some business men, particularly those who own or head a small or medium sized business, who may have other thoughts.

Such men are likely to be baffled and unhappy with the tempo of today.

They are baffled by an unpredictable Supreme Court, and by a Federal Trade Commission which uses its power to indict, prosecute and judge in a constant effort to extend its power. They are unhappy at their exposure to the whims of government bureaus, and to fanciful court decisions in such loose laws as the Lanham Act, the Robinson-Patman Act and others.

Is it any wonder that it may sometimes occur to such business men that they might better give their business to some lawyer, asking only in return a secure job and peace of mind.

Perfumes Best Slogan

Speaking of perfumes, there is quite a wide spread opinion in the industry that the smartest and most effective phrase ever created for perfume advertising is the one used by D'Orsay, "Someone Lovely Has Just Passed By."

In the opinion of some able people in the perfume business, this more perfectly expresses the entire appeal and reason for perfumes than anything that has ever been said. We, ourselves, think that it compares favorably to several advertising slogans in other industries that are world famous.

For this reason, it is difficult for us and many others to understand why D'Orsay has recently been submerging it in small type under the plates of their current advertising.

8:10 Shadow

Throughout the years beards have been the subject of bitter controversy. They have been shorn off, commanded to be worn, taxed, tinted and curled.

Since the trend today is to be clean shaven, the task of shaving has been somewhat lessened with all the modern conveniences on hand such as plumbing, razors and shaving aids.

The House For Men, Inc., manufacturers of shaving aids, in a recent booklet, "The Fine Art of Shaving" point out that the average American spends something like 6,000 hours, or about two years of his life keeping the whiskers under control. To aid him in the struggle this pamphlet lists certain procedures to be followed to ensure good grooming.

For the man who staggers sleepy eyed out of bed into the bath-room and gropes for his razor, while turning on the hot water, The House For Men recommends washing the face with His soap and then massage the face with the fingertips, using a circular motion, working upward and outward. Apply a hot towel, covering the whole face, repeat this procedure two or three times. Apply His Smooth Shave Base and massage again. Wet the brush well with warm water, work up a creamy lather with His Shave Cream and put on face.

Wet the razor and shave. Wash the face in warm water, rinse generously with cold water and then dry. Pat on (do not massage) His After Shave Lotion. Finish off with a light touch of His Balanced After Shave Talcum. After applying the powder, pat face lightly with a dry towel to insure even distribution and a pleasing finish.

By now our average American shaver has given himself a really decent shave and can go down to breakfast without a care in the world with no need to worry about being late for the 8:10 since he has already missed it.

A New Theme for Perfume Advertising

Perfume advertising is already feeling the effects of the critical attitude toward advertising which is developing throughout the industry, and which was originally stimulated by the industry's Committee, whose chairman is Jack Wiedhopf.

Three companies are already showing evidence of this new type of thinking, and next year will undoubtedly bring forth a great deal of perfume advertising that will strike a completely new note from the school that has prevailed in the past and particularly during the past five years.

The first advertisement to appear, inspired by this new thinking, was the Coty advertisement signed Philip Cortney, which appeared in a recent issue of the New Yorker.

Lucien Lelong's new advertising is now appearing in the current issues of the fashion magazines.

Ciro's interpretations of this new theme will appear in the November issue of several magazines, including Esquire and Holiday.

NEW PRODUCTS AND NEW PACKAGES

SHARP & DOHME, INC. of Philadelphia announces the national release of Blood Group Specific Substances A and B for the conditioning of Group O blood to be used in transfusions.

WOOBURY claims that its new line of de luxe creams represents another milestone in skin care. The discovery of *Penaten*, a skin beautifier with superior penetrating qualities, has resulted in the preparation of this complete new formula line of six creams.

MIRACLE FOUNTAIN SHAVING BRUSH CO. of Chicago has come up with a shaving brush equipped with a reservoir handle that holds a complete tube of any shaving cream. A twist dispenses as much or little as required.

SHELLMAR PRODUCTS CORPORATION of Mount Vernon, Ohio, introduces a new disposable and collapsible nursing bottle for infants, invented by Nurse Adda May Allen. Discarded after each feeding, this nearest approach to breast feeding eliminates the necessity for washing and sterilizing processes.

DERMETICS, INC. launches a new silent selling counter-kit. This "New Beauty in a Minute" kit holds six eight ounce bottles of fresher-uppers.

MANHATTAN MACHINE MANUFACTURING CO., INC. is turning out a pretty snazzy little combination of compact and cigarette case for the Lin Bren Products Corp. Made of gold-plated Vilmite, a Celanese plastic coated mesh, they have the glitter but not the weight of metal. Strictly purse-conditioned!

HARRIET HUBBARD AYER highlights her recently introduced Golden Chance Talcum, and Pretty Package Glamour Grains with fancy wraps and labels printed by Richard Krause, Inc.

PARKE, DAVIS & COMPANY announces two important hormone preparations, Antuitrin "S" the standardized, highly purified preparation of chorionic gonadotropin; and Synapoidin, a balanced, highly potent preparation combining the chorionic gonadotropin with the anterior gonadotropic hormone, now supplied in dry form.

GUERLAIN, INC. takes pleasure in announcing the return to America of two famous Guerlain Toilet Soaps, Geranium, and Iris.

SCHICK INCORPORATED of Stamford, Conn., introduces the first travel kit to be built around an electric shaver. The Travel Kit contains the Schick Super, with cord, plastic ring and cleaning brush; nylon tufted hairbrush, lucite comb, mirror, container for toothbrush and tooth paste and nail-file. Its leather case was designed by Rumpp.

SHARP & DOHME introduces "Delvinal-Diethylstilbestrol" for the control of menopausal symptoms. In tablet form, this medication combines the sedative properties of sodium vinbarbital with the estrogenic activity of stilbestrol.

COLGATE-PALMOLIVE-PEET COMPANY is ready for immediate distribution of the New Cashmere Bouquet Hand Lotion. The lotion is now natural skin pink, and comes in "finger-grip" bottles.

PARKE, DAVIS & COMPANY is ready to market Crystalline Procaine Penicillin-G in Oil with Aluminum Monostearate. Suspended in peanut oil containing two per cent of aluminum monostearate, the penicillin injection will be prolonged in effect, lasting in some cases, for 96 hours.

PARKE, DAVIS & COMPANY'S Benylin Expectorant is a palatable, raspberry-flavored syrup useful in the treatment of coughs and other symptoms of congestion associated with colds. It is free from narcotic drugs.

REX FIFTH AVENUE presents the Rex Tripledor Compact. This compact, shown in twelve patterns, is designed to eliminate powder film on the mirror. The triplador is a third door ringed with an odor-proof vinalite rim that hermetically seals the powder.

NORMA MANUFACTURING CO. offers solidified perfumes presented in crystal-clear containers topped with gleaming gold colored metal. There are three delightful fragrances.

The NATONE CO. is presenting the new Ramrod lip brush which is modern and eye-appealing and easy to use. The case is slim and attractive and makes a convenient purse accessory.

ALEXANDRA DE MARKOFF offers music along with beauty in a luxurious traveling case. Besides an array of Alexandra de Markoff beauty aids, the case holds a handsome portable radio for pleasure in traveling, or at home.

THE SIGMA PRODUCTS CORP. has introduced Breath-o-Lator. Breath-o-lator, developed by the Crosby Research Foundation, Inc., Hollywood, is a scientific breath control that was formulated to neutralize the odors from tobacco, cocktails, garlic, onions, etc.

MARCEL ROCHAS is featuring Mouche, a fragrance which is now available in the United States, along with Femme and Mouselline. Mouche is a delightful blend, beautifully packaged in a blue box covered with black lace.

TANGEE'S new glamourizer combines Tangee lipstick and a perfume atomizer in a decorated golden case. At the top there is an atomizer which gives a gentle mist spray and at the bottom there is a large size Tangee lipstick.

CHARLES OF THE RITZ is introducing in the United States two of Dior's perfumes. They are called Miss Dior and Diorama, packaged dramatically in grey and gold with the Directoire motif.

LESQUENDIEU'S Optimiste, imported and distributed by Tussy is making its debut at the opening of the year's most festive season. Optimiste is a complex blend with a flower-fresh lightness. The packaging is a profusion of clouds, stars, mandolins and Pierrot and Pierrette.

HIRESTRA LABS. is offering an Endocreme package for holiday selling. It contains a two ounce jar of Endocreme Hormone face cream, and a three ounce bottle of Hand Beauty, attractively packaged in a white box.

Plastic Caps

. . . TO MEET YOUR PACKAGING REQUIREMENTS

CLASSIC

Available from stock: from 8 to 38 mm, in short, medium, and tall skirt; regular finish or with well for applicator or a holder for dropper. We can match any color you want.

CLOVER LEAF

For glamorous packaging of glamorous products! Available in most popular sizes and in any color. Write for details and prices.

PRIVATE MOLD CLOSURES TO YOUR ORDER

You benefit by the experience we have acquired in making private mold closures for some of America's most famous products. Let us work with you

STANDARD CAP AND MOLDING COMPANY, INC.

PLASTIC CLOSURES

307 S. EATON STREET • BALTIMORE 24, MD.

OFFICES IN ALL PRINCIPAL CITIES

LATIN-AMERICAN REPRESENTATIVE: ROBERTO ORTIZ, HAVANA

H&D BOXES

DESIGNED to protect

DESIGNED to display

This corrugated shipping display box is easy to handle in the packing department and provides real product protection in transit. But this is only the beginning. When the box reaches the dealer, it is quickly opened into a colorful, sales producing counter display. It exhibits and merchandises the product at point of purchase and increases sales. For an outstanding sales success consider the H & D Duplex. Consult the H & D Package Laboratory on ALL packaging problems.

HINDE & DAUCH

Authority on Packaging

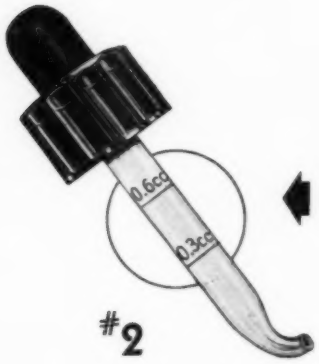
EXECUTIVE OFFICES: 4805 DECATUR ST. • SANDUSKY, OHIO

H&D

FACTORIES IN:

BALTIMORE 13, MD. • BUFFALO 6, N. Y. • CHICAGO 32, ILLINOIS
CLEVELAND 2, OHIO • DETROIT 27, MICH. • GLOUCESTER, N. J.
HOBOKEN, N. J. • KANSAS CITY 19, KANSAS • LENOIR, N. C.
MONTREAL, QUEBEC • RICHMOND 12, VA. • ST. LOUIS 15, MO.
SANDUSKY, OHIO • TORONTO, ONTARIO • WATERTOWN, MASS.

New Perfection DROPPING PARTS



#2

ACCURATELY CALIBRATED In Any Color

#1

#3

#4

This Inexpensive EXTRA FEATURE Adds A Welcome Convenience To The Use of Your Product

Accurate calibration of New Perfection dropper glasses adds immeasureably to the user's satisfaction with your product. Not only is the specified dose measured with more precision, but the tedious and time-wasting practice of counting drops is made unnecessary.

Trade-marks or firm names may also be imprinted on the glass, assuring that the name will be identified with the product each time it is used.

We can supply bulbs in natural rubber or oil-resisting Amekine, caps of plastic or metal in many sizes and colors, and various types of dropper glasses in any length. New Perfection dropping parts will fit your own bottles, or can be supplied in combination with our Modernistic bottles in Amber, Blue, Green or Clear glass. Sizes: 2 cc, ⅛, ¼, ½, 1 and 2 oz.

Write for Samples and Quotations

PENNSYLVANIA GLASS PRODUCTS CO. INC.

"Glass Goods of the Better Kind"

428-432 NORTH CRAIG ST. • PITTSBURGH 13, PA., U. S. A.

Peaks of efficiency...

A CLOSURE should be judged by the efficiency of its seal. For without an efficient seal your product quality, your investment, yes even your reputation and your business may be jeopardized. Make sure your products receive dependable airtight and leakproof protection . . . seal them with the scientifically designed *Anchor* C. T. Cap. Its deep rolled, accurately pitched thread contacts the underside of the glass thread and exerts an even downward sealing pressure on the liner. And its unique thread construction eliminates wedging and jamming—makes for easy, effective resealing, time after time, protecting products until entirely used.

Anchor
CONTAINERS and CAPS

PRODUCTS OF
ANCHOR HOCKING GLASS
CORPORATION
LANCASTER, OHIO

The world's largest and most powerful telescope atop Mt. Palomar is the Peak of Efficiency in the study of the universe

IT'S Anchor* *C. T. Caps*

FOR THE PEAK OF EFFICIENCY

*Reg. U. S. Pat. Off.

It's *Glass* for merchandising...

WHEN you develop a merchandising plan or introduce a new product, you want a package that attracts attention and displays the contents effectively. You want a package that is recognized as being clean and sanitary . . . one that is inert—will not transfer any foreign elements . . . will prevent absorption of moisture, leakage or evaporation . . . and one that will deliver and keep your products at peak efficiency until entirely used. There is no better way to get all these advantages than to package in *Anchorglass* containers.

AND IT'S Anchorglass* FOR MODERN MERCHANDISING

*Reg. U. S. Pat. Off.

Uncanny Facts
Who said "Good old days"? Tinsmiths used to labor a full day to make 60 cans by hand. Today modern Continental can-making machines turn out that many in 10 seconds!
Dogs manufacture Vitamin C in their stomachs . . . but they have to have vitamins D, B1 and A in their diet. Canned pet foods are excellent for dogs because they contain these vitamins and other necessary elements in the right proportions.
Wasps' nests did it! It was while watching wasps build their paper-like nests from tiny bits of wood back in 1719 that a Frenchman named Reaumur first conceived the idea that paper could be made chemically from wood.
If you ever run out of gas, chances are you'll replenish your tank from a CCC utility container. Continental makes rugged steel containers, pails and drums for practically every use and re-use.
Wasps were not only 'way ahead of men in making paper, but they were first with another big idea--paper containers. For the wasp's nest is the forerunner of the millions of paper containers and paper cups that are filled today with ice cream, cottage cheese, potato salad and other fresh prepared foods.
These modern paper containers are an important part of our large family of products. Other standbys are tin cans, fibre drums, plastics, bottle caps, cork products. It's such a big family that our slogan is "the bigger the family...the better the service."
The bigger the family...
CONTINENTAL CAN COMPANY
...the better the service!

Please note this fact, too: Continental offers the very best in containers. They're sturdy, bright, tight . . . come in all sizes and shapes. In your field, for example, Continental offers round, oval and oblong cans with various styles of sifter closures—attractively lithographed with your own design.

"the
touch
of
beauty"
the cool smooth
feel of an H. A. Cos-
metic Jar prepares the
consumer for the fine
product within—
these handsome,
dignified sanitary
containers do a
constant selling job
for you.
HAZEL-ATLAS GLASS COMPANY
WHEELING, WEST VIRGINIA

Bottles by

FOSTER • FORBES

Glass Packaging of Distinction

FOSTER-FORBES GLASS COMPANY, MARION, INDIANA, U.S.A.

SALES OFFICES

KANSAS CITY	CLEVELAND	LOUISVILLE	ST. PAUL
DETROIT	MILWAUKEE	ST. LOUIS	NEW YORK
CHICAGO	CINCINNATI	ATLANTA	MEMPHIS

HAVANA, CUBA

tops *in Sales Appeal*
tops *in Manufacturing Perfection*
lipstick containers...
by Plume & Atwood

● Ever wish for an entirely new and differently styled lipstick container...one that would have instant **"pick-me-up" appeal?** Of course you have, and so has every other cosmetic manufacturer. But, how often have you been told it was prohibitive in cost or impossible to make?

Here, at **Plume & Atwood,** difficult-to-make containers as well as standard types, like those above, are produced daily by the thousands... and at reasonable cost. Our engineering staff particularly welcomes those designs that are often thought to be impossible to make... for at Plume & Atwood, **the "impossible" is performed every day!**

Our representative will be pleased to call at your request.

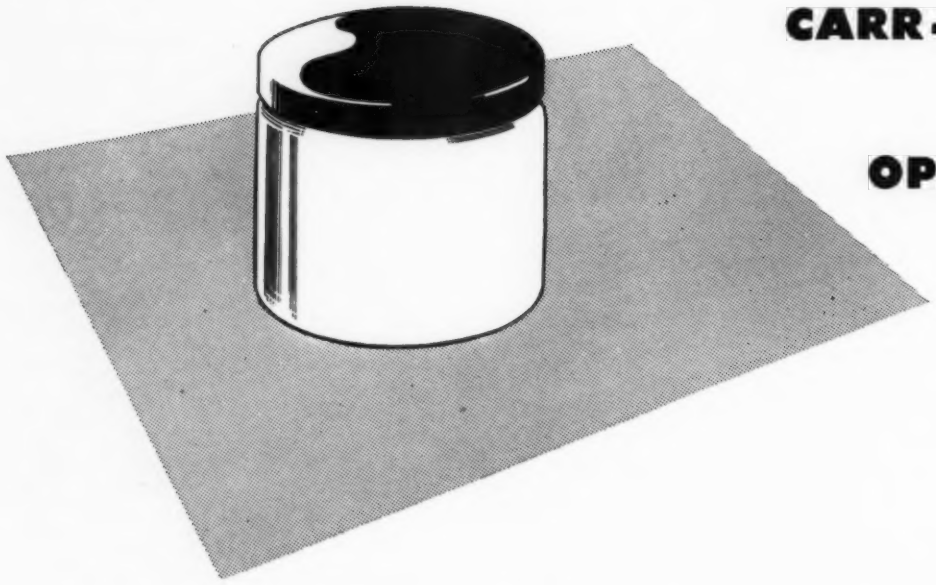
The Plume & Atwood Mfg. Co.

EST. 1869 **WATERBURY, CONNECTICUT**

Many leading manufacturers specify

CARR-LOWREY

OPAL JARS



They meet the most exacting packaging requirements. They are exceptionally white and opaque. They lend themselves admirably to attractive display. Carr-Lowrey Opal Jars are available for prompt delivery in a complete range of sizes from ½ oz. to 16 ozs.

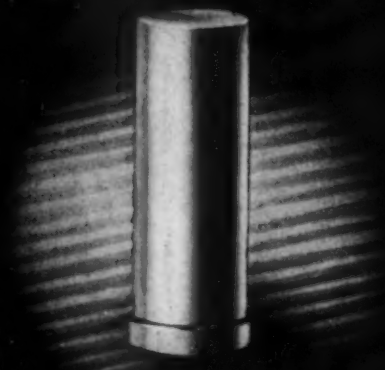
CARR-LOWREY GLASS CO.

Factory and Main Office: BALTIMORE 3, MD.

New York Office: 40 WEST FORTIETH STREET • *Chicago Office:* 1502 MERCHANDISE MART

Broder does it again

COMPLETELY REVOLUTIONARY



PRECISION PROPULSION

4 PIN CUP SWIVEL LIPSTICK CONTAINER*

Wholly different from anything ever made

Fool-proof mechanism as accurate and velvet-smooth as a precision watch movement

ALWAYS

- Eliminates cup wobble.
- Prevents shearing and taking off sheen of filler.
- Completely locked in four places at all times.
- Cup rides on 4 pins on a double track.
- No jamming — Pins cannot slip out of track
- Eliminates returns due to faulty or defective mechanism.

Plus BRODER patented Free Wheeling . . . the cup which rides up or down ONLY when the cap is off. Gives you a NON-SMUDGE CAP.

In Rich Low DeLuxe All-Polished Brass protected by a Startling New NON TARNISH Lacqeur

LOOKS BETTER . . . WORKS BETTER . . . COSTS LESS

PHONE . . . WIRE . . . WRITE

BRODER INDUSTRIES

INCORPORATED

*Pat. Pdg.

55 FERRIS STREET, BROOKLYN 31, N. Y. • MAin 4-3772

NEW YORK SALES OFFICE • 565 FIFTH AVENUE • MUrray Hill 8-4270

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101 West 31st St., New York City

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Company.....Title.....

If after 24 hours examination I wish to return "Drug and Cosmetic Review" it is understood that my money will be refunded at once, on publishe 's receipt of the book.

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Like the sleek, well-groomed appearance achieved by so many beautiful women, beauty in packages is the result of planning . . . of attention to the details of design, color and harmony. That's where Meritseal can help. Meritseal's sparkling colors and smooth, rounded contours give your product that "luxury touch" . . . help your product to be seen first and to sell first.

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If yours is a product that must meet top-flight competition, it will pay you to know more about Meritseal. We'll gladly send samples, prices and full details on request.

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Division of
Crown Cork & Seal Company

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WESTERN REPRESENTATIVE: WESTERN CROWN CORK & SEAL CORPORATION . . . SAN FRANCISCO . . . LOS ANGELES

Out of this World

...BUT DOWN TO EARTH

With compelling interpretation, Warnercraft packaging emphasizes the finest qualities of your product. Warnercraftsmen, long experienced specialists in economical packaging, impart to your product that priceless distinction which is "out of this world . . . .but down to earth."

We'd like to tell you more about Warnercraftsmanship. A letter will bring our new illustrated packaging handbook.

W

WARNERCRAFT.

Finest Name in Packaging

THE WARNER BROTHERS COMPANY

Makers of set-up and folding boxes of all types, transparent acetate containers, hand made specialties, counter displays and dispensers.
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Why
a Plaskon Molding Compound
is used for these striking
Cosmetic Containers

So radiantly beautiful... so stimulating to sales...

because they're

Plaskon Molded Color

These Plaskon Molded Color cosmetic containers are produced by Colt's Manufacturing Company, Hartford, Conn.

● In the highly competitive field of cosmetics, *eye appeal* of containers is a powerful sales factor.

These handsome Colt's containers, made from Plaskon Molded Color. are excellent examples of those producing sales for many world-leading cosmetic manufacturers.

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Highly important in the use of Plaskon Molded Color for cosmetic containers is the fact that this material is completely resistant to common commercial solvents, and is impervious to the effects of oils, greases and waxes. Molded Plaskon is non-porous, and resistant to dilute acids and alkalies. This plastic material cannot in any way affect the delicate or distinctive aromas of creams, powders, perfumes or other cosmetics.

Plaskon Molded Color is warm to the touch and attractive in appearance, which encourages handling and use of the packaged product.

Thermosetting Plaskon urea- and melamine-formaldehyde molding compounds have a wide range of advantages, that induce greater efficiency in manufacturing and merchandising methods. Our experienced field men are available to help you adapt *thermosetting* Plaskon Molding Compounds to your needs. Write for free book on Plaskon* Molded Color.

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Top off
YOUR BOTTLE OR JAR *with a*
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Any Size *Plain or Embossed* *Any Shape*
or
Designed and Manufactured
to your Specific Requirements

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GIVE YOUR PRODUCT
Shatterproof PROTECTION
with LUSTEROID Vials and Tubes

Customers appreciate products packaged in Lusteroid. They know that these products are *safe* from accidental roughness in handling because Lusteroid will not break.

It's worth looking into Lusteroid for product protection *and* distinctive packaging. There's economy in handling, labeling, packing and shipping. All colors of the rainbow—clear or opaque. Sizes from ¼" to 1¼" in diameter and lengths up to 6" with cork, slip-on or screw-cap closures.

Write for descriptive bulletin.

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HOW GOOD A SALESMAN IS YOUR CONTAINER?

A well-designed, distinctive container can be a real point-of-purchase salesman for your product. When you put National Can lithographed metal containers on your sales force, you step up the selling power of your product three ways. You gain eye appeal through proper colors . . . recognition through distinctive design . . . confidence through the long-lasting product protection that only metal can create. These are selling points with which National Can Containers have been helping to boost customers' sales for nearly fifty years.

Here is where National Can may be of decided aid to you. For when you call in National Can, you command a complete and closely cooperating lithography service, thoroughly equipped to act on problems of container design. Effective color selection, striking photography, careful composition of illustration, durable container construction — all these important sales factors are provided by trained and experienced National Can specialists.

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OXZYN COMPANY

MANUFACTURING

Cosmetics of Quality

SINCE 1877

ONE PLEASANT AVENUE CLIFTON, NEW JERSEY

NEWS...

Dr. Fellows with S.K.F.

Smith, Kline & French Laboratories, has appointed Dr. Edwin J. Fellows, associate professor of pharmacology to Temple University School of Medicine,

DR. EDWIN J. FELLOWS

as head of the firm's newly formed pharmacology section in the research division.

Although Dr. Fellows' new association with SKF will be on a full-time basis, he will retain his rank as associate professor at Temple. During this coming year he will give a number of lectures at the school.

In addition to Dr. Fellows, Edward Macke and A. James Fendricks, formerly technicians in the pharmacology department at Temple University School of Medicine, have also joined Smith, Kline & French as research pharmacologists.

Merck Appoints 4 Vice Presidents

Four executives of Merck & Company, Inc., have been appointed vice presidents by the board of directors, president George W. Merck has announced.

The new company officers are: Reginald P. Lukens, vice president for production; Eugene J. Lyons, for personnel; Blythe M. Reynolds, for engineering and purchasing, and Dr. J. L. K. Snyder, for domestic sales.

Mr. Lukens has been in charge of manufacturing since 1935, and in 1945 assumed general supervision over all packaging and shipping operations. He is a graduate of Rutgers University.

Mr. Lyons joined Merck in 1946 as director of the company's newly established industrial relations divison. Previously he had been with the Airplane division of Curtiss-Wright Corp.

Mr. Reynolds became associated with Merck in 1944 and has been director of engineering and purchasing since March 1947.

Dr. Snyder has been with Merck since 1932 as head of general sales, now as vice president for domestic sales, his responsibilities have been enlarged. Before joining Merck, he had been works manager and director of J. T. Baker Chemical Company.

Fritzsche Branch Changes

Several changes have been made known among the branch office personnel of Fritzsche Brothers, Inc.

As a result of impaired health, Joseph A. Gauer, manager of the Chicago branch, has been retired from active duty with the company. M. J. Niles,

M. J. NILES

who succeeds M. Gauer as manager of the Mid-West branch, one of the most important in the company, was formerly in charge of the New England territory with offices in Boston.

Harry P. Bowra is taking over the management of the Boston branch as successor to Mr. Niles. Until his transfer, Mr. Bowra covered the Western Canadian territory for Fritzsche Brothers of Canada, Ltd. Gerald D'Amico will assist Mr. Bowra.

In Western Canada, Mr. Bowra's former accounts will be handled by Ian MacInnes, a member of the Canadian affiliate's sales staff for over ten years. Manager Lloyd W. Speck of the Toronto branch will have the assistance of Jacques Champagne in serving the Province of Quebec.

Another change announced, is the appointment of John T. Brickner as manager of the firm's San Francisco

HARRY P. BOWRA

branch, replacing T. N. Davis who has gone into business for himself. Mr. Brickner will operate under the supervision of the Pacific Coast manager, Stanley Crouch.

Ciba Elects New V. P.

Karl Zimmermann has been appointed vice president and controller of Ciba Pharmaceutical Products, Inc., the board of directors has made known.

Mr. Zimmermann has occupied the office of controller since 1944. He recently was elected director of the Newark section of the Controllers Institute of America, and is also a member of the national association of Cost Accountants.

Magnus Heads Red Cross Group

Percy C. Magnus, president of Magnus, Mabee & Reynard, Inc., has accepted the chairmanship of the New York chapter sponsors committee for the 1949 Red Cross fund drive.

Mr. Magnus will be responsible for the formation of a committee to stimulate early support of the appeal in Manhattan and the Bronx.

In each of these great centers of the Soap, Perfumery and Cosmetics industries there is a Chiris company, with a complete production and distribution service. These companies pool all the experience and technical resources which nearly 200 years of outstanding leadership in the World's Essential Oil and Aromatic industries have made available to the House of CHIRIS.

ANTOINE CHIRIS Co., Inc.

119 WEST 57th STREET, NEW YORK 19, N. Y.

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GRASSE - PARIS

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LONDON

Merck's Family Day

About 10,000 persons attended Family Day on October 16 at Merck & Company, Inc., Rahway, N. J., plant. Relatives and friends of the 3,600 Rahway employees saw working conditions in the plant and saw at first hand how the business operated as a whole.

Among the visitors were hundreds of professional men, and city and county officials. Several hundred employees from the Philadelphia plant traveled to Rahway in special buses.

A tour of six major areas provided guests with an insight into the complex workings of a modern chemical plant. Display material was used freely to explain the functions of research, chemical control, administration, manufacturing, and packaging and shipping.

A special edition of the Merck Review, the company magazine, containing a map and detailed description of the tour, was presented to every visitor.

Anchor Hocking Changes

In order to coordinate the activities of Anchor Hocking's container and closure divisions, William V. Fisher, president, some time ago announced the creation of a package sales division, with S. B. DeMerell, vice president, as director.

Recent changes in the division, include the promotion of E. M. Lawrence as assistant director of package sales. J. E. Bellinger, formerly manager of the Detroit container and closure sales office, has become sales manager of general line containers. Edward Wells, with the company since 1939, and a container division assistant manager, becomes sales manager of carbonated beverage ware and specialties, and R. B. MacFarlane has been named sales manager of closures.

Ellenbogen Advanced by S. K. F.

Smith, Kline & French Laboratories, has announced the promotion of William C. Ellenbogen to head of the research analytical section.

Mr. Ellenbogen has been associated with the firm as a research analytical chemist since 1947. His new responsibilities include complete supervision of administrative and technical functions of the analytical section of the research laboratories.

Nat. Assn. Insec. & Disinf. Mfgs. Convention

The National Association of Insecticide and Disinfectant Manufacturers will hold its convention at Hotel Commodore, New York, December 6-7.

Named Research Director of D.P.I.

Dr. Norris D. Embree has been appointed director of research at Distillation Products, Inc. He has been acting research director since June 1.

DR. N. EMBREE

Dr. Embree joined the research department at Eastman Kodak in 1934 to work on a project which resulted in the establishment of D.P.I. as a separate company in 1939.

For the past several years as associate director of research Dr. Embree's efforts have included a vigorous program of vitamin research. He was also responsible for the new products department of the laboratories.

Packaging Institute Elections

The packaging Machinery Manufacturers Institute, at its sixteenth annual meeting October 12-13 at the Hotel Roosevelt, New York, elected the following officers for the ensuing year.

President, H. Kirk Becker, Peters Machinery Company, Chicago. Vice president, John P. Corley, Miller Wrapping & Sealing Machine Company, Chicago. Vice President, Edward G. Kuhn, Consolidated Packaging Machinery Corporation, Buffalo.

Newly elected directors are: William B. Bronander, Jr., secretary and general manager Scandia Manufacturing Co., North Arlington, N. J.; W. E. Coughlin, vice president, Pneumatic Scale Corporation Ltd., North Quincy, Mass.; George A. Mohlman, president, Package Machinery Company, East Longmeadow, Mass.; Louis R. Muskat, president, Triangle Package Machinery Company, Chicago.

George W. von Hofe, New Jersey Machine Corporation, retiring President, will remain on the Board as an ex-officio member. Other directors who remain in office are: Harry L. Cohen, Vice President, S & S Corrugated Paper Machinery Co., Brooklyn, N. Y., and Carl E. Schaeffer, President, Stokes & Smith Co., Philadelphia, Pa., G. Prescott Fuller, Dexter Folder Co., was Chairman of the meeting.

Universals New Unit Complete

Completion of the new addition to the plant at Hoboken, N. J., has been announced by the Universal Folding Box Company, Inc. This gives the company an entire block of buildings.

The company has already begun to use the new structure, according to Stanley I. Batkin, secretary of Universal. Formal dedication ceremonies took place when the new offices were completed in October.

NYAL Distribution

Nationwide distribution of more than 300 Nyal pharmaceutical products will be under the supervision of eight district sales managers, Dr. H. A. Cheplin, president of Nyal has announced.

Dr. Cheplin said that the eight regional managers will oversee operation in 40 territories comprising the U. S., Alaska, Hawaii, Guam, the Philippines and Puerto Rico. Overall direction of Nyal sales is handled by C. S. Aumack.

Pharmaceutical Advertisers Elect Irons

The Pharmaceutical Advertising Club of New York elected Robert N. Irons, of Wallace & Tiernan Company, president of the association. Other officers chosen were: vice president, Paul Roder, Ciba Pharmaceutical Products Inc.; secretary, Ted Miller, Borden Company, and treasurer, John H. Hinse, Fellows Medical Manufacturing Company.

CCC New Plant

Continental Can Company's new fibre drum plant, located on a 45 acre plot at Tonawanda, N. Y. has started production of "Leverpak" shipping drums this month, according to J. F. Price, general manager of Continental's paper converting division.

Paul E. Kreischer, formerly assistant factory manager of the Van Wert plant is factory manager. This is the third Continental plant devoted exclusively to the manufacture of fibre shipping drums. The other two both of which are operated by the Container Company, are located in Van Wert, Ohio and Reading Pa. A fourth now under construction in St. Louis County, Mo., and is scheduled for production about February 1, 1949.

Dodge & Olcott Anniversary

The one hundred and fiftieth anniversary of the founding of the original firm from which developed Dodge & Olcott, Inc., is at present being celebrated by that firm. It is the oldest company in America specializing in the import of essential oils and kindred products, having been in existence since 1798.

Robert Bach set up the company as an "importer of drug and chemicals," and operated an apothecary shop in conjunction with the importing business. Through the years the company has grown and expanded from the place at 128 Pearl St., to the present establishment of Dodge & Olcott, a subsidiary of U. S. Industrial Chemicals, Inc., at 180 Varick St.

A history put out by the company outlining the progress and development of the concern through the years noted that the original firm was located directly across Pearl St., from the residence of a well-known figure in the shipping business of those days, Captain Kidd, who was later to end up on a hangman's rope in London.

Dodge & Olcott is unique in American business history not only in the fact that it is one of the oldest firms in the country, but because through its century and a half of continuous operation the control of the business remained in three families—the Bach, Dodge and Olcott families. Four other names, however, appeared in the partnership titles of the firm in the early years. These were Wheaton Bradish, Thomas W. Cumming, George D. Phelps and John Colvill. The title of the firm became Dodge & Olcott in 1861.

The original members of the families now in the firm name were Richard J. Dodge, who became associated with Bach at the age of 14, and George M. Olcott, who became a partner at the

FRANCIS T. DODGE

age of 22. The present chairman of the board, Francis T. Dodge, is a grandson of Richard J. Dodge and J. Waldo Booth, a grandson of Olcott, is vice president in charge of foreign sales.

Currently Dodge & Olcott offers for sale more than 3,000 items in the lines of essential oils, tinctures, fixatives for perfumes, floral waters, resinous concentrates, balsams and gum, aromatic chemicals, perfume bases, flavors and esters. For more than three quarters of a century the firm has been an importing headquarters for Musk, Civet and Ambergris. The largest piece of Ambergris sent to the company weighed over 200 pounds and, 35 years ago, brought a price of $35,000 to its finders.

The roster of D & O employees is heavily sprinkled with long service records. Mr. Dodge, chairman of the board, is one of those at the top of this list, with 44 years' service. Among the 385 present employees, there are nine who have served 40 years and over, 25 with records of from 25 to 39 years, 40 from 15 to 24 years, and 38 more whose tenures extend from 10 to 14 years. Richard J. Dodge, first of the family in the company, and his son, Francis E., each gave 70 years of their lives to the concern.

Below is a view of the Dodge & Olcott factory at 86 William St., New York as it appeared during the 1880's.

Drug Outlets for Radio Sales

Drug stores, already in many instances junior department stores, might get to handle an altogether new item. According to J. H. Stickle, advertising manager of the Westinghouse Electric Corporation's Home Radio division, drug stores might act as outlets for radios.

Speaking before the fall business meeting of the Associated Chain Drug Stores, Mr. Stickle said that radios offer druggists "a golden opportunity that is worth looking into and thinking about." He went on to explain "I pick the druggist for several reasons. He has proved himself a versatile merchandiser. He depends more than any other merchant on radio advertising to help build traffic and volume. A high percentage of all radio advertising features products regularly sold in drug stores. It is to the direct advantage of the druggist to promote radio sales, and radio listening."

Gleason Heads Schering Sales Analysis

Francis J. Gleason has been made head of the sales analysis unit of the Schering Corporation, Bloomfield, N. J.

S & D Wins Safety Award

The Glenolden, Pa., plant of Sharp & Dohme, Inc., has been awarded first place in a national safety contest among fine chemical and drug plants, according to a statement put out by the National Safety Council.

The award is in recognition of a record of 243 days without a lost time accident established by Glenolden personnel during the past year. This accomplishment reduced Glenolden's accident frequency rate to 3.59. Average rate for the drug industry is 8.86.

Walter E. Stepp, safety engineer, and Dr. Harry C. Scarpa, Glenolden plant physician, accepted the award, a silver trophy, on behalf of the employees at the National Safety Congress in Chicago, October 18.

All the Popular Types of Penicillin Ready for Your Label

Baker produces not just two or three, but *several,* of the popular types of Penicillin, and in package sizes to meet the demands of your trade—under your private label.

The newest of these types—Procaine Penicillin G prolongs the Penicillin blood level beyond other dosage forms—makes possible fewer injections—reduces pain of injection—saves the time of physicians and nurses.

SIX TYPES AVAILABLE
IN VIALS AND IN BULK

1. Procaine Penicillin G
2. Procaine Penicillin G in Oil with Aluminum Monostearate
3. Sodium Penicillin G Crystalline
4. Potassium Penicillin G Crystalline
5. Sodium Penicillin Amorphous
6. Calcium Penicillin Amorphous

Baker formulates Procaine Penicillin G in peanut oil with Aluminum Monostearate to provide a most effective therapeutic dosage form. It is stable—uniform—free flowing. It remains constantly in suspension—will not cake or clog the syringe—requires no warming before injection.

Baker also offers Procaine Penicillin G in bulk containers for specific formulations.

If your company lacks a Penicillin plant and you *wish to be sure* of an adequate supply of one or more types of Penicillin, Baker—known for its chemical precision for nearly a half century—can meet the need.

Inquiries are invited. Address: *Fine Chemical Division,* J. T. Baker Chemical Co., Phillipsburg, N. J.

Baker's Chemicals

C. P. ANALYZED • FINE • INDUSTRIAL

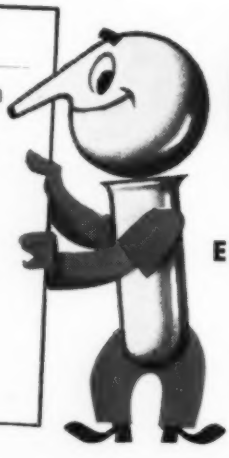
. . . compounders of pharmaceuticals and toiletries are turning to economical PETROHOL* isopropyl alcohol. They find that this alcohol has high *antiseptic* and *disinfectant properties, excellent solvency,* and *no residual odor*. PETROHOL* is free from government restrictions because it is non-potable.

PETROHOL* is just one of the many dependable solvents and hydrocarbons produced from petroleum and marketed by ENJAY, chemical affiliate of Esso Standard Oil Company. PETROHOL* is available in 91% or 99% concentrations in any desired quantities. Whatever your requirements are you can always depend on the quality and uniformity of any product bearing the ENJAY trademark.

Our technicians will be glad to assist you in developing new uses for PETROHOL*. For full details on the properties and application of PETROHOL* isopropyl alcohol, please write today to:

PETROHOL* Properties	91%	99%
Specific Gravity @ 20/20	0.8175-0.8190	0.7900 (Max.)
Acidity (acetic acid) (Max.)	0.002%	0.002%
Color	water white	water white
Moisture	———	clear with 19 vols. of naphtha
Distillation—Initial (Min.)	79.7°C.	81.5°C.
—Range (Max.)	0.8°C.	———
—Dry Point (Max.)	80.7°C.	83°C.
Non-volatile Matter (mgm./100 cc.) (Max.)	2	2
Purity (% vol.) (Min.)	91	99
Residual Odor	none	none
Water Dilution	clear	clear

*Registered Trade Mark



ENJAY

ENJAY COMPANY, INC.
Esso Building
15 West 51st Street
New York 19, N. Y.

McCullough Promoted

Jack M. McCullough has been named manager, premium sales of the Libbey Glass division, Owens-Illinois Glass Company.

JACK McCULLOUGH

Mr. McCullough, who will be located in the company's general offices in Toledo, joined Libbey in 1939 in the company's Chicago branch. Later he served in turn as manager of branches in St. Paul and Atlanta.

Iso-Sol Co. Formed

The Iso-Sol Company, Brooklyn, N. Y., has been organized to supply buffered isotonic vehicles for eye medications. These products are made from reagent grade chemicals and electrometrically standardized as to pH accuracy. The finished products are filtered through procelain candles and bottled in Neutraglass. The company is also prepared to supply private formula eye solutions in bulk.

Dr. Vanderkleed Retires

Dr. Charles E. Vanderkleed, vice president and scientific director, McNeil Laboratories, Inc., has retired but will continue to serve the corporation in an advisory capacity.

Simultaneously Dr. Vanderkleed announced the formation of a pharmaceutical and chemical consulting service located at 200 Harvard Ave., Collingswood, N. J. The newly formed organization provides specialized service on problems of labeling, manufacturing, and control. In addition to his new activities Dr. Vanderkleed has been appointed to the staff of the Philadelphia College of Pharmacy and Science.

Dr. Vanderkleed began his association with McNeil Laboratories 28 years ago, prior to that he was for fifteen years chief chemist for the H. K. Mulford Company of Philadelphia.

Squibb Appointments

Three appointments to important positions in E. R. Squibb & Sons have been made known.

J. R. Van Winkle has been appointed to the position of general superintendent New Brunswick manufacturing division of E. R. Squibb domestic operations. In this position Mr. Van Winkle is responsible for the manufacture of all Squibb products produced in the New Brunswick Laboratories. He has been with Squibb for 22 years.

Dr. W. E. Gaunt has been named manager of quality control for Squibb Manufacturing Laboratories and is in charge of quality control on all Squibb products manufactured in the New Brunswick, Brooklyn, and Queens plants.

Dr. Gaunt joined Squibb two years ago, coming to this country from Britain, where he received his education at Leeds, Aberdeen, and London Universities.

The third Squibb appointment was the naming of O. O. Vaught as manager of the production control division of Squibb domestic manufacturing laboratories. He is responsible for inventory control, planning and scheduling, traffic and materials handling.

Sharp & Dohme Staff Changes

T. L. Johnson, acting branch manager in San Francisco, has been named Chicago branch for Sharp & Dohme, Inc.

Mr. Johnson succeeds G. W. Haag, who has requested a Chicago district sales territory. Succeeding Mr. Johnson as acting manager at San Francisco is E. J. Donahue.

T. F. Davis, of the Portland branch has been appointed to the post of assistant manager at Los Angeles. At the same time, N. C. Oliver was named supervising clerk at Portland.

Barker in New Pepsodent Spot

W. Gardner Barker, market exploration manager of Lever Brothers Company, Cambridge, Mass., has been named director of new products in the company's Pepsodent Division, Chicago.

Joining Lever Brothers Company in 1937, Mr. Barker for several years was assistant to the advertising management. Following Navy service in the Pacific, he returned to the Lever advertising department, and was appointed market exploration manager in September, 1946.

Dr. Lowe on 2 Year Leave

Dr. Edmund W. Lowe, technical director of Edwal Laboratories, Inc., has been granted a two-year leave of absence which will be spent at Purdue

DR. E. W. LOWE

University where he will hold a research fellowship in the School of Chemical & Metallurgical Engineering.

His work there, among other things will consist in research on various aromatic nitro compounds and a seminar in industrial organic chemistry.

Dr. Walter Guthman, head of Edwal Laboratories, took leave of absence from Edwal to serve with the Army during the war, as a result Dr. Lowe had more administrative duties and some of the technical research work had to be postponed. With work now resumed full blast, Dr. Guthman and Dr. Lowe agreed it would be of value for Dr. Lowe to return to the academic laboratories and renew the basis of his technical research.

Abbott Conferences

Three winter sales conferences for Abbott Laboratories have been announced by H. S. Wilkinson, general sales manager. The Eastern division will be held December 11 and 12 at Hotel Waldorf-Astoria, New York; Central division, December 17 and 18, Palmer House, Chicago; Western division, January 6 and 7, Fairmont Hotel, San Francisco.

Edwal Folder

Edwal Export price list No. 26, giving price and describing 57 fine chemicals of various grades, manufactured, sold and available for export, are now available. Copies of the folder may be had by writing Edwal Laboratories, Inc., 732 Federal St., Chicago, Ill.

signposts to savings for CITRIC ACID USERS
Save on shipping expenses with CITRIC ACID ANHYDROUS
Save on storage, handling with CITRIC ACID ANHYDROUS

Anhydrous Citric Acid offers a more economical source of this acid, and at the same time you assure yourself of Pfizer quality. By using Pfizer Citric Acid Anhydrous you benefit from these savings:

First, you save on *shipping expense* because Pfizer Citric Acid Anhydrous contains no water of crystallization, and you pay freight only on the citric acid you buy and not on water! Figures show you pay freight on only 91.42 lbs. of acid instead of the full 100 lbs. of normal U.S.P. Citric Acid. This means over 8½% less on every freight bill!

Second, you save on *storage space* and *handling charges* because 10 drums of Citric Acid Anhydrous are equivalent to 11 drums of the U.S.P. acid. This means you eliminate one drum out of every eleven you formerly stored and handled.

Citric Acid Anhydrous is a granular product, identical in purity with the U.S.P. Citric Acid, and differs only in that it contains no water of crystallization.

Solutions prepared with Citric Acid Anhydrous are identical with Citric Acid U.S.P. provided, of course, that you make allowance for the water always present in the U.S.P. acid. And, unlike the U.S.P. Acid, the Citric Acid cannot dry out, thus overcoming any possible variations in the resulting acidity of your solutions. For further details, please inquire of Chas. Pfizer & Co., Inc., 81 Maiden Lane, New York 7, N. Y.; 211 E. North Water St., Chicago 11, Ill.; 605 Third Street, San Francisco 7, Calif.

PFIZER

Manufacturing Chemists Since 1849

Squibb Appointments

Carl E. Anderson has been appointed general manager of E. R. Squibb & Sons' domestic manufacturing operations with complete responsibility for the

CARL E. ANDERSON

domestic plants' industrial relations, production control, manufacturing, quality control, administration and factory accounting functions in Brooklyn, New Brunswick and Queens.

Mr. Anderson joined Squibb in 1946 as director of industrial engineering. In May 1947 he was appointed general manager of the Brooklyn manufacturing laboratories. Prior to his association with Squibb, he was with the Warren City Manufacturing Company as director of industrial relations.

Lueders Expands in Canada

George Lueders & Company of Canada has acquired a four story building which it will occupy exclusively. Located at 355 Place Royale, Montreal, there will be facilities for all departments, including increased laboratory and warehousing accommodations.

Felton Marks Twenty-Fifth Anniversary

A quarter of a century ago in quite modest quarters in Brooklyn, N. Y. Felton Chemical Company began the manufacture of aromatic and flavor chemicals under the direction of Dr. Joseph Felton, who has a rich background of study and research in Germany, Switzerland and France.

During the first World War, this country became aware of the dependence of this country on the highly developed dye industry of Europe, and also the disappearence of many essential raw materials for the flavor, food and aromatic industries. Dr. Felton pioneered in the establishment of the aromatic and flavor industry in the U. S. and in the years following the first World War his organization grew from the small building it occupied on Taafe Place to its present home at 599 Johnson Ave., Brooklyn.

Officers and directors of the company are: Dr. Joseph Felton, president; Louis Gampert, vice president; Sophie Felton, secretary and treasurer. The company maintains offices and stocks in Boston, Philadelphia, Chicago, St. Louis, San Francisco, Los Angeles, Toronto and a factory at 781 Williams St. Montreal.

Hewitt in New Post

The appointment of Con M. Hewitt to the new position of director of marketing for Sharp & Dohme, Inc., has been made known by John G. Bill, general sales director. Mr. Hewitt, succeeds Alfred E. Wills, assistant sales director, who will retire December 1.

Mr. Hewitt joined the organization in 1933, as a sales representative in the Kansas City district. He was

CON M. HEWITT

brought into the Philadelphia general offices as assistant to the Western sales manager in 1937 and made assistant sales manager of the Philadelphia district in 1940. In 1941 he was promoted to the position of sales manager of the Kansas City district. After that he was appointed export sales manager and served in that capacity until his latest appointment.

Joins Pfizer Staff

Glenn B. Hess, formerly associated with Vick Chemical Co. has joined the staff of the analytical department of Chas. Pfizer & Co., Inc., at its Brooklyn, N. Y. plant.

CIBS Xmas Dance

The C.I.B.S. are having their first annual Christmas party at the Hotel Warwick, December 12.

Tickets may be secured from Ray McCue, Polak & Schwarz, or Henry Budd, Ungerer & Company.

NWDA Officers

J. D. Crump, regional vice-president of McKesson & Robbins, Macon, Ga., was elected president of the National Wholesale Druggists Association at its annual meeting held last month in Chicago. Robert Morrisson, of Cook, Everett & Pennell, Portland, Me., was elected chairman of the Board of Control. Other officers are: First vice-president, George W. Kauffman, Kauffman-Lattimer Company, Columbus, O.; second vice-president, C. T. Lipscomb Jr., McKesson & Robbins, New York; third vice-president, Evarts Fox, Fox Vliet Drug Company, Pueblo, Colo.; fourth vice-president, Walter M. Mueller, McKesson & Robbins, Albany, N.Y.; fifth vice-president, Fred C. Osmers, Tacoma Drug Co., Tacoma, Wash.

Elected to the Board of Control for three-year terms were: W. R. James, Towns & James, Brooklyn; Fred M. Truett, Southwestern Drug Corporation, Dallas; Charles D. Doerr, McKesson & Robbins, New York; Roy P. Meyer, McKesson & Robbins, Chicago. Dr. E. L. Newcomb was reelected executive vice-president, and E. Allen Newcomb was reelected secretary.

Sun Chemical Elections

At a special meeting of the board of directors of Sun Chemical Corporation, George W. Ullman was elected president.

At the same meeting A. C. Horn was elected chairman of Sun's executive committee, and William Recht, vice president, was elected a member of the board of directors.

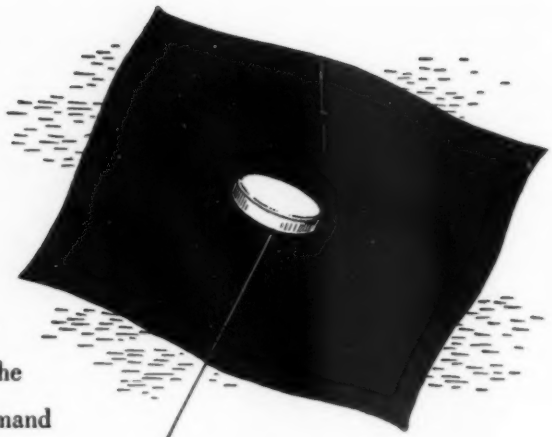
A. E. Horn, president of the A. C. Horn Company, division of Sun Chemical, and Ernest Nathan, president of

ERNEST NATHAN

Warwick Chemical Company, division of Sun, were elected vice presidents of the Corporation.

Albin K. Schoepf retired and James W. Raynolds resigned.

GIVE IT EVERYTHING



YOU ARE CONSCIOUS of the changes in the market—you are spending valuable time analyzing the new situation—you have assigned your top talent to the development of a superior product to meet the demand of the growing buyer's market.

Now that this fine product is ready, give it everything. Give it a package which is attractive, unique, inherently useful and so economical as to really do something for you in this tight, competitive market.

The Sanitape-Sealtite Continuous Strip Package is an entirely new conception of the principle of unit-packaging—sealing the tablet in its own air-tight compartment, producing a continuous strip of tablets and layering them in an ingenious cardboard container, which is the most convenient dispensing package available.

Give your product new sales power with the

Sanitape-Sealtite

CONTINUOUS STRIP PACKAGE

We shall be glad to give you complete information and details pertinent to your situation.

IVERS-LEE COMPANY · 215 CENTRAL AVE · NEWARK · N. J.

Sanitape-Sealtite is a unique method for packaging pills, tablets, capsules, creams and powders, by which each unit or unit-dose is sealed in its own air-tight compartment—assuring complete protection and maintained efficacy. Packages, machines and methods fully covered by U. S. and Foreign Patents and Patents Pending.

Ladewig Made V. P.

President Henry P. Bristol has announced that Edward G. Ladewig has been elected a vice president of Bristol-Myers Company. He will continue to

E. G. LADEWIG

be in charge of export for the company.

Mr. Ladewig joined the organization in 1944 as assistant to the vice president in charge of export, the late Walter L. Bomer. In November of that year, he was elected assistant vice president, the position he has held to date.

Rafferty Gets Chem. Ind. Medal

For his leadership in developing the synthetic aliphatic industry, strategic field of chemical production vital to the national economy, James A. Rafferty, vice president of the Union Carbide and Carbon Corporation, New York, has been awarded the Chemical Industry Medal for 1948, it was announced by Archie J. Weith, chairman of the American Section of the Society of Chemical Industry.

The medal, conferred annually by the American Section for outstanding application of chemical research to industry, was presented at a dinner meeting in the Hotel Waldorf-Astoria, New York, November 5, when leading scientists paid tribute to Mr. Rafferty both for his peacetime research and for his contributions to the wartime rubber and atomic energy programs.

Oxzyn Sold By American Home Prod.

Morris Cohen and a group of associates have purchased the Oxzyn Company from American Home Products Corporation. The Oxzyn Company is the oldest private label cosmetic manufacturing business in the country, having been established in 1877.

Mr. Cohen will serve as president of Oxzyn. Formerly an executive of American Home Products, he was also associated in the ownership of Hope, Inc. He will continue to operate the Hope business in addition to Oxzyn.

Officers of the firm are Frank A. Bergmann, who has been elected vice president in charge of sales. Mrs. P. M. Burrow has been named secretary. Other personnel are to be added and plans for expansion of the Oxzyn business are underway.

Named Sales Mgr. for Royal Pharm.

Earl G. Henwood, Jr., has been named sales manager of Royal Pharmacal Corp., Pittsburgh. A graduate of Philadelphia College of Pharmacy, Mr. Henwood formerly was with Rexall Drug Company.

Heath with Boody & Co.

G. Warren Heath has joined Irving R. Boody & Company, Inc., as manager of the chemical and pharmaceutical department.

Mr. Heath has been identified with the chemical industry for thirty years and has been associated with William R. Warner & Company, Inc., Chas. L. Huisking & Company, Inc., and Biddle Sawyer Corporation.

Scofield With Calif. Firm

Philip F. Scofield, former chief engineer, Jack & Heintz Inc., Cleveland, has been named chief engineer of Specialized Instruments Corp., Belmont, Calif.

Previously Mr. Scofield was in the engineering department of Bendix Aviation Corp. A graduate of Stanford University in electrical engineering he was active in the original installation of the famous Ryan High-Voltage Laboratory there.

E. H. Ravenscroft (left) chairman of the board of directors of Abbott Laboratories, was honored recently by the Board on his fortieth anniversary with the company. He started with Abbott in 1908 as an engineer. He is shown here with R. E. Horn, president and general manager.

Court Cutter Sales Head

Donn R. Court has been placed in charge of sales and distribution at Cutter Laboratories, Berkeley, Calif., succeeding G. P. Snow who is acquiring

DONN COURT

controlling interest in the Hyland Laboratories of Los Angeles.

The new sales chief has been associated with Cutter since 1946, when he joined the organization as general sales manager. He came to Cutter from Bauer and Black division of the Kendall Co. Mr. Court is a native of Memphis, N. Y. and received his higher education at Syracuse University.

Rice Elected Secretary of AMA

The American Managment Association has made known the election of James O. Rice, as secretary of the management organization. Mr. Rice was formerly assistant secretary and editor.

Mr. Rice joined the AMA in 1935 as editor of the association's periodicals. Since 1940 he has also served the members of the association as staff executive in charge of planning conferences. Since 1945 he had been assistant secretary in charge of research and publications.

Col. Kimble Honored

A reception and dinner at Haddon Hall, Atlantic City, October 17 marked the eightieth birthday of Colonel Evan E. Kimble, founder of the Kimble Glass Company.

Jointly honored with Col. Kimble were J. A. Carnegie, a fifty year Kimble employee and 150 others who have been with the company more than ten years.

W. E. Levis, chairman of the board of Owens-Illinois Glass Company of which Kimble is now a division, paid tribute to Col. Kimble as one of the founders of a great American industry.

The Sofskin Company

Gets Uniform Quality in its famous Sofskin Creme by

MIXING with

GLEN MIXERS

Sofskin Creme, for lovelier hands and skin, is the favorite of millions of women for its soft, creamy smoothness . . . one of many cosmetic, drug and chemical products ranging from light foam latex to abrasive paste mixed with AMF GLEN MIXERS.

85 gallon AMF Glen Mixer, at the Sofskin Company

AMF Glen Bowl Unloader automatically raises and tilts bowl, pouring mix at a controlled rate of flow. Special bowl-tilting truck is also available for floor dumping, or floor-to-floor discharge of product. When desired, a gate is provided on bottom of bowl for discharging product onto a continuous conveyor belt.

FEATURES

PLANETARY ACTION—The Beater Spindle turns in opposite direction to the travel of the Revolving Head, resulting in quick and thorough assimilation or combination of materials. This reduces mixing time, increases production.

VARIABLE SPEED CONTROL—Permits full-load starting at low speeds with less motor strain. Speed can be gradually increased during mix by simply turning control wheel. Unlimited number of "in-between" speeds obtainable . . . *not just 3 or 4 fixed speeds.*

POWERFUL DRIVE—The exclusive AMF Power-Plus Head transmits more pulling power directly to beater's edge.

BEATERS AND BOWLS—Interchangeable Beaters, specially designed for specific mixing requirements, available from stock or designed to order. Beaters and bowls available in tinned steel, stainless steel, or other special materials. Bowls can be supplied with splash covers, dust tight covers, discharge gates. Jacketed bowls for heating and cooling operations also available.

Pre-loading of Interchangeable Bowls Makes Mixing Practically Continuous

AMF GLEN MIXERS *are available in 30, 40 and 85 gallon capacities. For complete information and specifications, write American Machine & Foundry Company, 485 Fifth Avenue, New York 17, N. Y. Ask for TA-236.*

GLEN *Industrial* **MIXERS**

Allyn with N. Y. Import Firm

Thurston & Braidich, New York importer, has added Lewis H. Allyn to its technical sales staff. Mr. Allyn was formerly associated in technical capacities with the Virginia Dare Extract Company, and George Lueders & Company, Inc., New York.

Salesmen's Assn. of A. C. I. Annual Meeting

The annual business meeting of the Salesmen's Association of the American Chemical Industry was held October 27, at the Hotel Roosevelt, New York.

A nominating committee was chosen to name the association's officers. Named as Chairman of the committee was J. McInnis of Commercial Solvents, to assist him the following were also chosen: J. A. Chew, of John A. Chew Company; Frank Fanning of F. A. Fanning Company; Phil LaBue of LaBue Chemical Company; E. J. Maguire of Grisselli; J. McGinity of Millmaster Chem. Co.; and S. F. Urban of E. R. Squibb & Son.

A feature of the meeting was a show presented by members of the association, which ought to put the industry back fifty years. The various barber shop quartets that appeared are available for entertainment at reasonable fees for clambakes and confirmations and agree in advance that they will appear at their own risk.

Laboratory Director Appointed

Appointment of Dan V. Hall, as director of pharmaceutical control at Haack Laboratories, has been announced by J. C. Jensen, vice president.

DAN V. HALL

Mr. Hall will supervise the testing of all ingredients used in Haack medicinal products and will have full charge of research and development. He was formerly director of pharmaceutical control, Armour Laboratories, Chicago.

Smith-Dorsey Sales Conference

Fifty-five medical service men attended a sales conference of the Smith-Dorsey Company at the home office in Lincoln, Neb., the first part of October.

Speakers at the sales conference included F. W. Misch, secretary and general manager; Dr. F. S. Bukey, vice president in charge of research; Dr. G. R. Underwood, medical director; F. D. McDermott, sales manager; J. L. McMahon, sales promotion manager; Dr. George W. Covey, and departmental heads in the research and manufacturing plant.

John B. Quick of Denver, who has completed 25 years of service as a medical service representative was presented with a wrist watch by the president of the company R. E. Bennett.

Friedman, Toni Sales Mgr.

George J. Friedman, Western regional sales manager of the Toni Company, has been appointed general sales manager.

Mr. Friedman joined Toni in St. Paul, in 1945, assuming the responsibility for sales in the Western region. Previously he had served as sales manager of the Consolidated Royal Chemical Corp.

Serving under Mr. Friedman in the revised Toni sales organization are the following: Carle Randall, Eastern regional manager; Stuart K. Hensley, East Central regional manager; Robert Harris, West Central regional manager; Robert Wallace, Western Regional manager; Jack I. Levant, wholesale divisional manager; Reg Knock, syndicate sales manager; J. A. Torrens, executive sales assistant, and Murray L. Sachs, manager of sales consultants.

New Unit for Vitamin Corp.

A 3700 square foot laboratory, devoted exclusively to vitamin preparation, manufacture and experiment is to be housed in a four-story building at 274 Lafayette St., New York, acquired by Vitamin Corporation of America.

Boyd Advanced

Schieffelin & Company, New York announces the promotion of James M. Boyd of Houston, Texas, to Southern sales supervisor. Mr. Boyd formerly covered the Southern portion of Texas as a member of the company's sales and detail staff.

Co-Metic Club to Meet

The Co-Metic Club, Inc., of Minneapolis will hold its annual meeting, with elections and banquet on December 7 at Hotel Radisson, in Minneapolis.

Members of the Salesmen's Association of the A. C. I. shown at the annual business meeting. Top Row (L to R): Walter Farley, Chas. L. Huisking & Company Inc.; Leo Kenny, Seydel Chem. Co.; Sid Craven, Joseph Turner & Co.; Tom Callahan, Witco Chemical Co.; Frank Fanning. Middle Row: Bart Sheehan, Arnold Hoffman & Co.; Ralph Ericsson, Sumner Chemical Co.; Herb Cornell, General Chem.; Jack Butler, Industrial Chemical Sales, W. Va. Pulp & Paper Co. Bottom Row: Jerry McGinity, Millmaster Chem. Co.; Joe Holzer, McKesson & Robbins; Jack Henry, Joseph Turner & Co.

Dr. Silver Joins Van Pelt & Brown

Dr. Samuel L. Silver has been appointed technical director of Van Pelt & Brown, Inc., Richmond, Va.

Since receiving his Ph. D. in Organic Chemistry from the University of Pittsburgh in 1934, Dr. Silver has been associated in various technical and executive capacities within the pharmaceutical field.

He has served with The Zemmer Company, Pittsburgh, as chief of the control laboratories; with the Purity Drug Co., Inc., and recently with the Veltex Company, Birmingham, as director of research and plant manager.

Bales Resigns from Tek Hughes

John F. Bales has resigned as executive vice president of Tek Hughes, Inc., effective as of December 31. After that date he will assume an executive position with Yardley & Co., Ltd.

Oak Ridge Course

Dr. J. David Taylor, a research scientist with Abbott Laboratories, is among the scientists attending a course at Oak Ridge, Tenn., on the techniques of using radioisotopes. The course is the fourth of a series of one month courses offered by the Oak Ridge Institute of Nuclear Studies.

Lorr Appointment

Lorr Laboratories, New York, has appointed Jon Sobotka to supervise advertising and publicity. In joining Lorr, Mr. Sobotka will continue to direct publicity of Milkmaid and Dura-Gloss.

Ortho Pharmaceutical Elects

H. C. McKenzie has been elected president and general manager of Ortho Pharmaceutical Corp., Raritan, N. J. He succeeds Philip B. Hofmann, who becomes chairman of the board.

Hinde & Dauch Plans New Factory

The Hinde & Dauch Paper Company, Richmond, Va., has purchased land near that city for the construction of a new corrugated box factory.

The new factory will employ about 100 employees, and the operations will be under the direction of J. M. Southall, plant manager, who has been with the company for over 21 years.

The building will be a one story brick and steel structure. Construction will begin shortly and completion is scheduled for fall of 1949.

Named Sales Mgr. for Royal Pharm.

Royal Pharmacal Corporation has appointed Earl G. Henwood, Jr., as sales manager.

Processing Plant Completed

A new processing plant costing in excess of $2,000,000 has been completed for the Irvington Varnish Insulator Company on Newark Bay.

One division of the plant will manufacture "Cap-Seal" liners for bottle caps, while the other will process cashew nut oil into a number of commercial and industrial products.

The entire project, situated on a ten-acre site fronting Newark Bay consists of 13 buildings and three tank farms for the storage and blending of process chemicals and cashew nut oil.

Schlotterer Addresses CIBS

The October luncheon of the Cosmetic Industry Buyers and Suppliers Association heard Ray Schlotterer, secretary of the Essential Oil Association, discuss aspects of the industry.

A nominating committee for the association was appointed consisting of Bob Proom, of Robert W. Proom Associates, Bob Ring, Hewitt Soap Company, and Dick Crider, Dow Chemical Company. They are to make their recommendations at the next meeting.

Struhs on Aroscent Sales Staff

Aroscent Inc., has added Harry W. Struhs to its sales staff. Mr. Struhs has been associated with the Procter & Gamble Company for the past 25 years as a sales manager of the New York, New Jersey and Pennsylvania and New England territory.

Other additions to the Aroscent sales staff for the New York area are: James J. Curley formerly with Magnus, Mabee and Reynard Inc., and Julian M. Laub.

John Allen

John W. Allen, 56, vice president of McKesson & Robbins Inc., and manager of the company's Dallas division, died from a heart attack October 21, enroute to his home in Dallas.

A leading figure in wholesale drug circles, Mr. Allen had been connected with the drug business for 37 years. He joined the J. W. Crowdus Drug Company in Dallas in 1911, where, beginning as a stock clerk, he worked up through various positions to become credit manager in 1929.

When the Crowdus Company merged with McKesson & Robbins in that year, Mr. Allen continued in that position until 1933 when he was appointed special sales representative.

Mr. Allen, a native of Terrell, Texas, was prominent in the business and civic life of Dallas. He was first vice president of the National Wholesale Druggists' Association in 1947.

He is survived by his widow, a daughter and a son, John Jr.

Dr. Lloyd L. Heck

Dr. Lloyd L. Heck, department head of Merck & Company, died October 23 in Rahway Memorial hospital. He was forty-five years old. Dr. Heck had been associated with the company for the past ten years.

Elliott Fraenkel

Elliott Victor Fraenkel, an executive of American Home Products Corporation, died recently after a long illness.

Born in Sydney, Australia in 1885, Mr. Fraenkel came to this country in 1914 and was on the staff of both Burroughs Wellcome and Johnson and Johnson before joining Frederick Stearns & Company.

Mr. Fraenkel rose from the ranks to the post of general manager of that company, and in 1940 he was elected president. He left to join American Home products in 1941.

Mr. Fraenkel leaves a widow, a son, E. V. Fraenkel Jr., and a daughter Eve.

Rosa Kroog

Miss Rosa Kroog, who four years ago, completed fifty years of service with George Lueders & Company, Inc., died October 25, in Brooklyn.

Miss Kroog entered the employ of the late George Lueders in 1894 as the first female worker for the firm. For the half a century she was with the firm she was in charge of issuing the company's invoices. Her golden jubilee was celebrated November 12, 1944 with a banquet at the Hotel Astor, with all the officers of the company and about 100 employees present.

ASK STOKES

Pack it faster, easier, cheaper on Stokes Tube-filling Machines

If it's no thinner than kerosene . . . no heavier than roofing-cement . . . if it will flow . . . you can pack it in tubes with a Stokes Tube Packaging Machine.

Tubes are flexible, compact, light, clean to handle. They offer strong selling-points in the package.

Stokes' commanding reputation in the field of Tube Packaging machinery is only partly due to the mechanical superiority of Stokes Machines. Largely it is due to the complete advisory, research and test service by which Stokes engineers help you to choose precisely the right machine and attachments from the complete line of Stokes Tube Packaging machinery.

The Stokes-patented Westite Hermetic Closure assures positive sealing of oily mixtures . . . of "leakers" and "seepers" . . . of substances that tend to oxidize . . . of other specialties that are usually difficult to package in tubes.

You need not guess about Tube Packaging. Write F. J. Stokes Machine Co., 5932 Tabor Rd., Philadelphia 20, Pa.

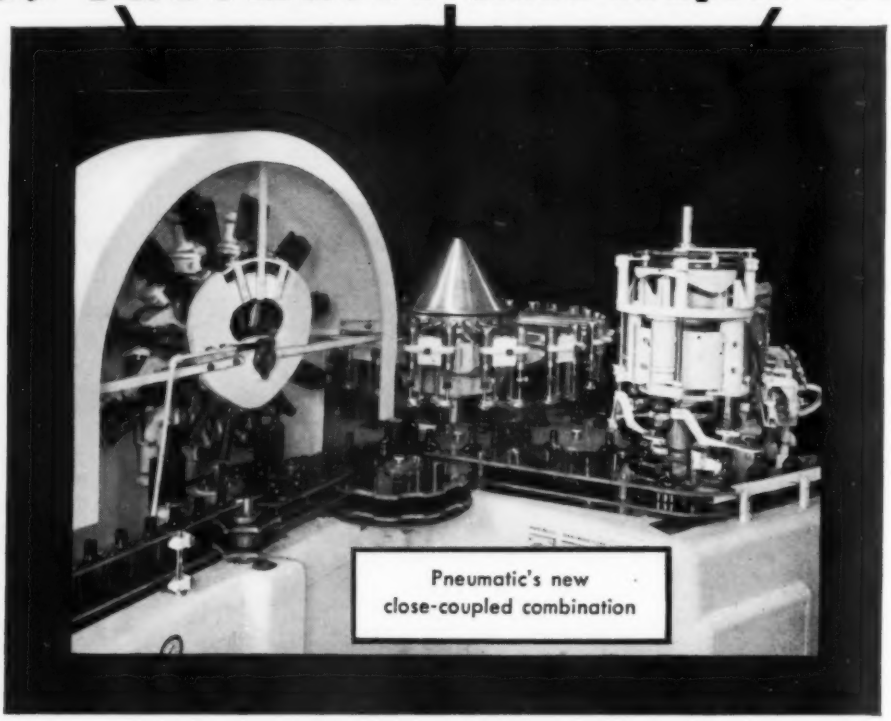
FJS

Stokes makes Tablet Machines, Pharmaceutical equipment, Tube Fillers, Vacuum and Special Processing equipment, Vacuum Pumps and Gages, Plastics Molding Presses, Water Stills, and Special Machinery.

Stokes Series 90 Special Model Tube Filling, Closing and Sealing Machine, equipped for "Fat-Filling." Handles up to 30 tubes per minute, up to 2" diameter, 10" length, 9 fluid ounces capacity.

STOKES KNOWS HOW

Now PNEUMATIC close-couples them for



speedier, space saving *Positive Control Bottling*

It's the biggest step forward in automatic bottling in a decade—and only Pneumatic, the one manufacturer making equipment for all major bottling operations, could have made this contribution.

By close coupling machines for bottle cleaning, filling and capping, Pneumatic has stepped up operating speeds along with a tremendous saving of floor space. The line is designed for smooth positive handling of glassware and involves a new principle of filling, wherein the container is "overfilled" and then the excess drawn off, resulting in exact fill height. This fill height may be varied without halting production. A Labeler attached to the close-coupled unit completes this hi-speed hook-up. Production of 120 full quarts per minute is now being attained on an installation already in operation and higher speeds are assured on smaller containers.

That's only part of the story. Pneumatic's Close-coupled combination offers many other advantages and operating improvements you should know about. Write us today about your bottling problem.

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PACKAGING AND BOTTLING MACHINERY

Over ninety different machines for the packaging of dry, free-flowing products and the cleaning, filling, capping and labeling of containers for liquids and semi-liquids

Production Forum

By FRANCIS CHILSON
Industrial Consultant

Tablet Standardization

At the recent Packaging Institute meeting in New York I pointed out in a discussion of tablet counting machines, that we are attempting to solve the tablet packaging problem without defining the problem, just as we are in connection with electronic inspection of ampoules. I remarked that for this reason there is on the market no perfect tablet counting machine.

A perfect tablet counting machine must always be accurate under any and all circumstances. It must operate with equal speed and efficiency on all sizes of tablets, pills, capsules. It must handle all types of container. It must be easy to clean, easy to adjust—preferably without too many change parts for adjustment; it must package at least 10,000 tablets a minute into bottles of 100s.

No machine on the market comes within shooting distance of these broad requirements. Within a limited range of shapes and sizes many machines will meet these requirements.

Before we ever get a machine that will meet all requirements, I think the industry should standardize tablet shapes and sizes. Counting different shapes and sizes there must be at least two hundred. We ought to standardize the cylindrical shape in a limited range of thicknesses and weights. We ought to get rid of the extremely high crowns and cockeyed shapes and embossing.

The trade has accepted standardization with reference to soft elastic capsules and dry filled capsules because the public is accustomed to these shapes. Any departure from them would result in manufacturing and cost difficulties. Likewise because of manufacturing limitations, the trade always has accepted the conventional pill shape. But because tablets can be made in almost any shape we have been stuck with a lot of cockeyed shapes which are complicated still more by embossed or debossed lettering, initials and symbols.

The two trade associations should get together and draw up a set of standards. My recommendation would be to limit uncoated tablets to rounds with a very low if any crown. Embossing should be eliminated and those firms requiring trade-marks, initials, symbols etc. on the tablets should be satisfied with debossing. Ten sizes should fill all requirements. A similar set of standards should be prepared for coated tablets. Usually these can be handled easier than uncoated work except when they lack uniformity and attempts are made to bring the edges down too fine. Coated tablets should not have high crowns because they ride up on each other in counting channels or throats. Very often they are pear shaped in cross section, bumpy or oversized. One of my clients used to have several different size bottles for identical tablets in identical counts. Whenever the coaters came in with hangovers, the packaging department subsequently had to shift bottle sizes to accomodate the tablets sent them!

If we can agree on a standard shape or a limited number of shapes and if we limit sizes we can cut costs all around. We can as a consequence limit bottle sizes, shapes and inventories. This applies also to cap, carton, unit container and shipping case sizes and inventories. We can run packaging departments with fewer set-ups of tablet counting, cottoning, capping, labeling and cartoning machines. Even when the lines are not mechanized we can get higher production out of hand work set-ups.

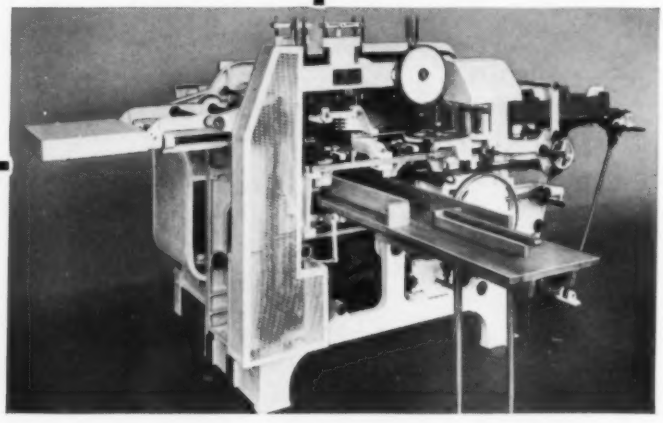
At the Packaging Institute meeting there were two very brash machinery representatives. Both of them were cocksure their machines could handle *anything*. One of them has a machine that is still experimental only. He obviously has ignored the fact that not only is a tablet counting machine required to count tablets, it must also handle a variety of container shapes and

SAVE UP TO 60% on MATERIAL COSTS

WITH MACHINE BUNDLING

New **Model F-10-J**

Designed especially for smaller size packages, this new machine is about two-thirds the size of our standard F-10 bundler. Its speed is adjustable from 8 to 24 bundles per minute. It is also adjustable for various sizes.



ALSO SAVES ON LABOR SHIPPING COSTS · FLOOR SPACE

Companies that have adopted machine bundling are making large savings. That's why more and more manufacturers are switching to this modern method of packing their products.

Machine bundling replaces costly cardboard boxes with economical wrapping paper in roll form. That makes an immediate saving of up to 60% on material costs alone. Then there is the saving in labor—for one bundling machine with one operator will produce up to 24 bundles per minute. Since the paper used is far lighter than cardboard boxes, there is also a saving on shipping costs, both to and from your plant. And a roll of paper will replace hundreds of boxes, saving on storage space, too.

Our bundling machines can be fed directly from the cartoning or wrapping machines. Goods can be bundled in dozen or half-dozen lots, and the machine can be adjusted to accommodate various sizes.

SURPRISINGLY STRONG. The bundle produced is sealed as tight as a drum and stands up well in shipping and handling.

WE'LL SHOW YOU

how your product can be bundled by machine—at a saving. Send a dozen of your packages to our nearest office, asking for full information.

PACKAGE MACHINERY COMPANY, Springfield 7, Mass.

NEW YORK CHICAGO CLEVELAND ATLANTA DENVER
LOS ANGELES SAN FRANCISCO SEATTLE TORONTO MEXICO, D.F.

PACKAGE MACHINERY COMPANY

Over a Quarter Billion Packages per day are wrapped on our Machines

sizes as well. The other was so positive that his machine can do everything, that a few days later I had one of my clients submit a simple tablet packaging problem to him and he was obliged to admit his machine couldn't handle it. Too many machine manufacturers assume that because they are doing a job satisfactorily for one manufacturer with round tablets, they can do the same sort of job for all. As many of you know all sorts of conditions can be encountered in dealing with deceptive looking little round tablets! All "ain't" gold that glitters.

The Miracle

I should sit back and smugly boast of my political acumen because I won several substantial bets on the election. Some of my money went down shortly after Dewey was nominated. But to tell the God's honest truth I am a sucker for long odds. When any bloke waves long green under my nose offering ten to one I'll bet on anything.

The one thing I did clearly perceive long ago is that we still are riding the ground swell of the labor movement. I meet a lot of factory people in my work. I know how they think. I was one of them myself not so long ago. The simple fundamental fact of employee-employer relations is that employees instinctively distrust the motives of their employers. That's why the polls went awry. Employees will say they are going to vote the way their employers think they should and then vote their own way. I remember well the Landon-Roosevelt election. Howard Sumner, vice president of the Norwich Pharmacal Co. was then the political right hand in Norwich of my good friend Mel Eaton, who at that time was Republican State Chairman. I remember well that election day. About noon Howard called me up in high glee to assure me that in Norwich it would be a landslide for Landon. Everybody, he said, was voting early and virtually everyone was wearing a Landon button. It would be a walkover! When the vote was counted Landon had two votes in Norwich—Howard's and Mel's but he didn't have a hell of a lot more!

Toward the end I think Mr. Dewey sensed the underlying force of the labor movement. His Boston address must have made Franklin D. Roosevelt smile in his grave. Higher minimum wages; higher old age pensions; social security for all workers including domestics and farm help; medical care for everybody. But it was too late. Little Tommy was already licked but he didn't know it.

What you and I can be thankful for is that the Labor Party i.e., the Democartic party is only a little left of center if any, an observation proved, I think, by the hell of a shellacking the Commies and radicals got under the leadership of Wallace. Another thing we can all be thankful for is that after D. Day (Disappointment Day), so many of us who supported Dewey, feel that the country is strongly united now and that Truman will give us a good administration. I think he will. Meanwhile we Republicans had better get busy and find a candidate over five feet tall without a mustache!

Holding Companies

I hope the new Congress will place severe restrictions through S.E.C. on the further growth of holding companies. Many holding companies serve no useful purpose. They restrict competition by buying up profitable enterprises. As holding companies increase in size they limit free enterprise by making it increasingly difficult for the small manufacturer to start a business or to stay solvent in it if he already has started. They limit the conception of new ideas and developments because it is cheaper to buy up established companies with established products, than it is to develop new ones. Not only do they do this as a matter of policy but Time Magazine once quoted Alvin Brush, Chairman of American Home, as saying that the only way a holding company could continue to show substantial profits is to continue to buy up profitable new companies.

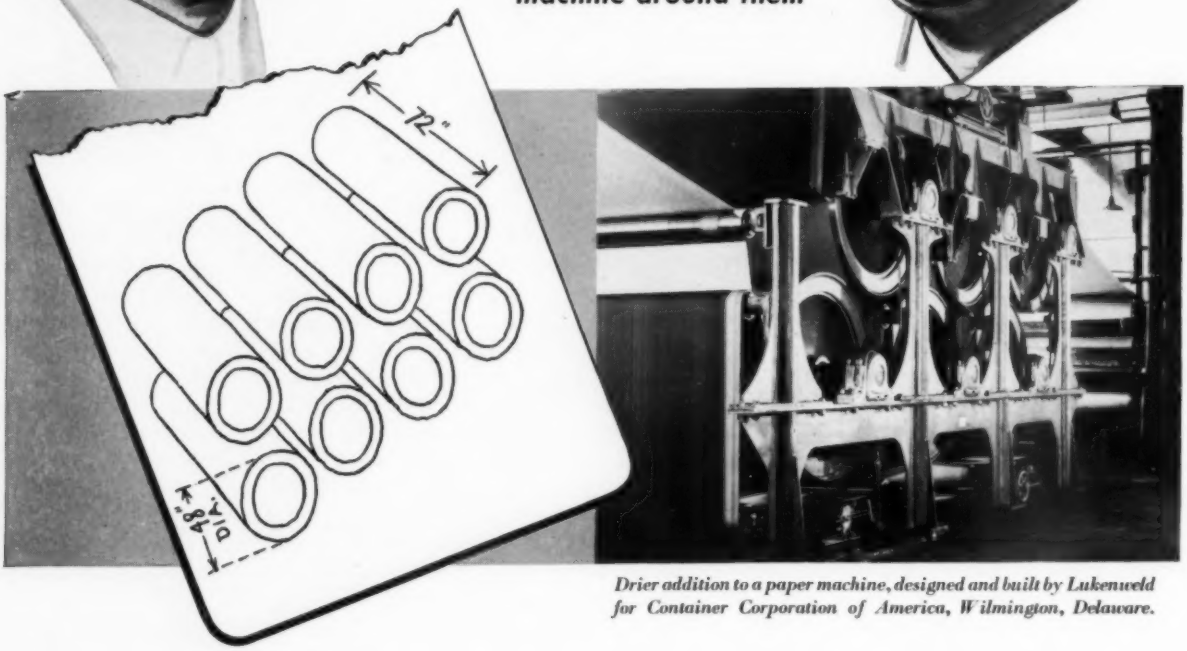
This line of reasoning is substantiated by the number of one profitable companies which eventually withered and died on the vine after being taken over by one holding company or another. Not only do I think that holding companies indirectly throttle private enterprise but I also think they serve to place too much economic power in the hands of too few men. I know all the classic arguments for the existence of holding companies but experience and observation have taught me most of them are bunk. I don't think that the national welfare is served by allowing anybody to buy and sell companies, which involve the futures and happiness of many people, like so much merchandise. In any such transaction human values are involved and many people are always hurt.

I am not decrying holding companies which are formed to own and protect sources of raw materials or even distribution channels. I am not disparaging holding companies that are automatically formed, as DuPonts was, to exploit new discoveries and inventions. I am merely protesting those holding companies which do not grow out of themselves by their own inward force and which grow by the acquisition of profitable small and often unrelated enterprises. I think it's economically unsound in the long run. Our economy was built by the enterprise and energy of a lot of small entrepreneurs. It's far sounder for the economy of the nation to have a hundred independent million dollar enterprises than a single hundred million dollar enterprise.

Even as it is, economic necessity in the mass production fields is closing the door to small manufacturers or business men with limited capital. No longer can an enterprising man start a power company for instance; it takes too much capital to supply the type of service the public must have even in a very limited area. But time was when a man could. I know a man who started

"EIGHT cast-iron, single-shell drier rolls are needed..."

"SIX jacketed drier rolls will do it, and Lukenweld will build the machine around them"



Drier addition to a paper machine, designed and built by Lukenweld for Container Corporation of America, Wilmington, Delaware.

● To increase the output from one of Container Corporation's paper machines, it was estimated that eight cast-iron, single-shell rolls would be needed to provide the additional drying capacity. Space was limited, so that was a factor.

Lukenweld determined that *six* Lukenweld Jacketed Drier Rolls would accomplish the same results as the eight cast-iron rolls. This would require less space, simplify the supporting structure and reduce costs. Lukenweld designed and built the machine to house and drive the rolls accordingly.

That machine is shown in this photograph at work in their plant—a compact unit packing a lot of production into small space. It is of welded plate construction, providing high strength and increased rigidity with minimum weight.

We at Lukenweld like to take ideas developed by your engineers and operating men and make them materialize. As designers and manufacturers of complete drying machinery, we are well acquainted with drying work in many industries.

May we talk with you about your drying or production design requirements? Write Lukenweld, Division of Lukens Steel Co., 482 Lukens Bldg., Coatesville, Pa.

LUKENS
LUKENWELD DIVISION

DESIGNERS, ENGINEERS AND MANUFACTURERS OF MACHINERY

• • SPEED SCRAP TO THE MILLS TO MAKE MORE STEEL • •

a power company fifty years ago. The same circumstance prevails in railroading, the manufacture of paper, where a single paper making machine may cost a million and a half dollars; it applies in the manufacture of motor cars. It applies in many manufacturing and service industries. But there are many other manufacturing and service industries in which an enterprising man with small capital can get a start and within a short time reach a volume that will enable him to hold his own against competition. In the drug, cosmetic, chemical, and parts of the food industry, the small manufacturer who attains a volume which enables him for example to utilize an automatic liquid line can produce as efficiently as the large manufacturer who has six automatic lines. As a rule he produces cheaper because of lower factory and administrative overhead. His overhead is not loaded with "management" fees, high power attorney and lobbyist's fees and the cost of all kinds of staff services. The small manufacturer is bold; he can innovate and experiment with his products, his methods, his sales and advertising procedure, without having to have his ideas and appropriations approved by the proper committee of a holding company located two thousand miles away. I hate to see the broad avenues of opportunity narrow into one way streets.

Old Men

It isn't years that make a man old; it's attitude. I have repeatedly said that a really good brain never ages unless a man has been afflicted with serious illness or prolonged worry. While I have no use for the old malingerers who have got by all their lives simply because management never got wise to them or didn't get wise until the barnacles had stuck to the organization so long that management felt a moral responsibility for them. There is still a lot of sentiment in business but the time is running out when we can afford to pay for it.

But I really like and respect old men who've always done their jobs to the best of their abilities. I don't like to see aged young men forced to retire automatically at a certain age when they have still many more years left in them and don't wish to retire. One of the best salesmen I ever knew is a young man just turned seventy. He sells industrial paints and he knows more about paint than any man living. (From this remark you can see how he's sold himself to me.) Not long ago he broached an excellent idea. If I'd put up half the capital he'd put up the other half and he'd throw up his job, which he's had for forty years, and we'd go into business together. He'd handle the sales end of the business and I the manufacturing. At seventy mind you! He's not coasting for a pension. He's not worried about the future. He's a young man with the experience and knowledge and wisdom of the years.

I'm proud of having met a lot of young men like him in the trade and out of it. The only trouble with men like that is they refuse to recognize that their *physical* capacity has lessened. Management sometimes has a hard time handling them because of this. Many of them have not appointed understudies because their physical and mental capacities always have been equal to the demands of growing businesses. When management, recognizing that the best of men eventually die, appoints understudies on its own initiative, these young old bucks get sore and complain they are being undermined! Their pride is hurt; they resent the implication that their physical powers have diminished. The paint salesman mentioned above complained bitterly about his company because they had restricted his territory to Connecticut, south eastern New York, nothern Jersey—the biggest industrial area in the country.

In such situations management policy is at fault. Management faces each case as it comes up instead of having an announced policy that every executive in the company must have an alternate or assistant after he has completed a definite period of service. The experience an old man has is properly company property and he should leave it behind him when he passes on because it won't do the fishworms a damn bit of good.

Dead Items

Squibb has reported that 55 per cent of its sales last year were made on items that were not in the line five years ago. I have heard many similar reports from other companies. These acknowledgements are the most convincing proofs of the economic value of the battle I have been waging for years to kill dead items. I realize that every drug and cosmetic manufacturer cannot limit himself to specialty items only. Some manufacturers, especially in the drug branch of the trade, must be service houses; they must service their trade with short profit items. But since they cannot service their trade with every item it might require, the thing to do is limit their lines to the service items on which they make the most money. When an item gathers dust on the manufacturer's and also on the wholesaler's shelves, that item certainly cannot be rendering much "service" to the trade. Some salesmen stick to the ridiculous assumption that a service is being rendered if the trade knows the item is available on demand—even if it doesn't demand it! If the big fellows quit selling the standard items the business would fall to smaller firms whose volume would increase to a point where they could make money through long runs of short profit items.

Many firms make ninety per cent of their profits on ten per cent of their items. Many of them make ninety per cent of their profits on items they didn't have five years ago. Economic laws are inexorable. When an item begins to die bury it quick!

Reducing Costs

With the costs of materials and labor on the rise and with certain taxes increasing, more and more companies are casting about for means to reduce production

THERE'S A *Story* BEHIND THIS LECTRODRYER

DRY air from this Lectrodryer has standardized operation of this tray drier at the Arner Company, manufacturing chemists of Buffalo, N. Y.

It happened years ago, before humidity control was recognized as a necessary tool of the process industries.

A foreman complained to a Lectrodryer representative, "I'm getting nowhere with the materials in that tray drier; been stalled for three days." The summer air was loaded with moisture. Its temperature couldn't be increased without injury to their products.

Right next to this drier was Arner's special tableting room, kept DRY by a Lectrodryer. Our engineer suggested extending its air duct to the drier. They started the job at once and, before he left that afternoon, DRY air was flowing to the drier and they could see beneficial results immediately. Later, this other Lectrodryer was installed to serve the tray drier.

Arner's story has been duplicated in hundreds of plants all over the world. Lectrodryer weather has replaced hit-or-miss dependence upon outside weather. Processes have been standardized, production speeded up, products improved.

Let Lectrodryer solve your DRYing problems —air, gases, organic liquids. Write Pittsburgh Lectrodryer Corporation, 309 32nd Street, Pittsburgh, 30, Pennsylvania.

In England: Birlec, Limited, Tyburn Road, Erdington, Birmingham.
In Australia: Birlec, Limited, 51 Parramatta Road, Glebe, Sidney.

LECTRODRYERS DRY WITH ACTIVATED ALUMINAS

LECTRODRYER

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costs. One company, Burroughs Wellcome & Co., Inc., has found the answer with the installation of labor and time saving equipment such fork trucks and pallets for the handling of units loads and materials.

Burroughs Wellcome like many other industries with the increase of business found it necessary to handle material in larger amounts, while at the same time there also had to be conservation of time expended in the process. One solution was to handle larger amounts of material in a single operation. But here again additional amounts of material would serve only to increase the time consumed with outdated methods of handling.

Hence the company turned to fork trucks, pallets and unit loads, a system that was able to cope not only with increased volume but also to store it. With fork trucks and pallet loading the company was able to convert warehousing from the square foot method to the cubic foot method, by storing larger quantities vertically.

According to Joseph D. Lennox, superintendent of Burroughs Wellcome's materials handling division, a 2,000 capacity electric truck with a lift of 126 inches, was placed in operation May 1946. "There was a saving of at least 25 per cent in floor space assigned to storage, while we handled material—both incoming supplies and finished product—in larger amounts, and in less time."

Study of the plant area, with special attention to space occupied by floor supporting columns, or to be assigned to aisle widths, was made by plant engineers. A winged pallet, 42 inches by 48 inches was chosen as standard. Low load limits on upper floors precluded the use there of heavy fork trucks so lighter battery operated driver lead type trucks were substituted. Battery-powered equipment was selected in this case because it is fume free in operation, thus preventing contamination of product.

As instances of savings in man-power and man-hours in the receipt, handling and storage of material, take the starch processed by the company. This is received in bags, each weighing 132-lb. At one time company trucks, with helpers, were dispatched to New York City—a distance of some 20 miles—to pick up loads of approximately 100 bags at a time. Exclusive of the time for the round trip of the truck, it would take three men an elapsed time of 1-½ hours, (or 4-½ man-hours) to load a truck, and similar length of time to unload and warehouse the contents at the plant. Each bag was handled manually on to the truck. At destination each bag was unloaded manually. Skid-loads of 16 bags at a time were moved into the storage area by hand-truck. Since skids could not be tiered, the load was broken down and manually piled into stacks. When needed in production manual labor broke down the stacks and moved the bags into the manufacturing area.

When starch is received it is palletized in unit loads of 16 bags. As needed it is removed from storage by fork truck, placed on a small, flat-bottom, over-the-road truck, four pallet-loads to the truck, and moved to the manufacturing plant. Time of loading takes one man some 12 minutes. At the plant the pallet loads are removed from the truck and warehoused by one man and a fork truck in the same time, either being moved into storage or to elevators which take it to the manufacturing floors.

Installation of the fork truck unit-load system also "paid off" in another way for Burroughs Wellcome. Cooperating with the Continental Can Company, one of its suppliers, resulted in the latter shipping unit loads of cartonsof containers on 43 inch x 48 inch double-faced pallets. The load consists of 80 cartons, arranged in layers of 10, eight-high, which are removed from the trucks and moved into storage awaiting use. Previously shipments had to be handled manually, one carton at a time from the over-the-road truck of the supplying company, to storage, and there piled awaiting manual break-down for further movement into the Packaging Department. As in the case of bagged starch, the

manual operation took three men an elapsed time of 1-½ hours, or 4-½ man-hours. Now one man, with a fork truck, takes 12 minutes, the pallet loads being moved into storage and tiered four-high and five deep between floor supporting columns.

Battery-powered trucks, of the fixed-platform type, had been used at Burroughs Wellcome since 1925, for the movement of goods. Three of these type trucks are still utilized for the transport of unpalletized items between the 14 buildings comprising the Company's Tuckahoe plant.

Good use was also made of equipment in the packed goods department. Here the filled cartons are fed by conveyors to centrally located gluing and sealing machines. Prior to installation of the pallet system these cartons were placed on skids and transferred to the area reserved for a given product and hand-stacked. In the filling of orders it was necessary for the order clerks to pick from stacks over a large floor area.

Now the sealing machine operator palletizes the packed goods, and a fork truck moves these filled pallets

to the section of the floor where the particular product is stored. There it is tiered three high, placing one-third more stock in the same space used by the hand-stacking method and using approximately one-half the number of man hours.

Since packed stock includes quite a number of different products, it must, of necessity, cover a large area, and a section has been set aside at the end of the floor which is near the Shipping Department. Here a pallet-load of each product is placed on each side of a center aisle. Order clerks fill less-than-pallet-load quantity orders from this area. The company is required to keep a careful record of all stock issued; consequently batches of stock must be issued in proper numerical sequence. To this small order section goes one pallet load of the oldest batch of each product, and the fork truck operator is responsible for the proper stacking of all such stock. One readily sees how this small order section cuts down the travel time of order clerks and takes the guess-work out of filling from the correct batch.

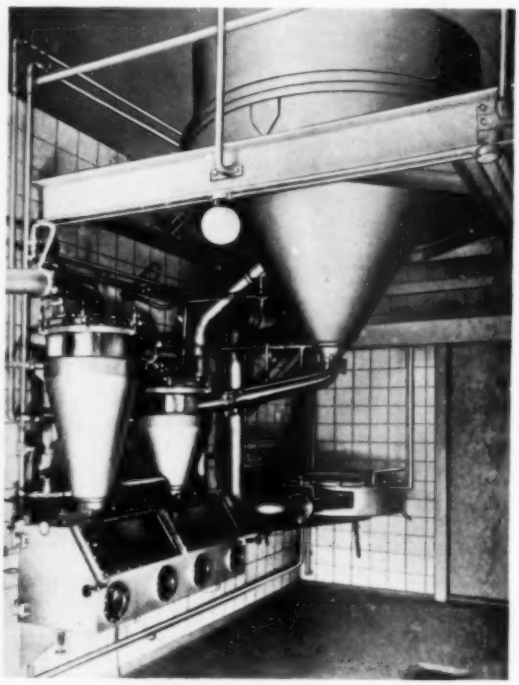
The company found that a fork truck should not move more than 250 feet from the receiving area, and that if your buildings are scattered, two trucks of the same capacity should be purchased, one to be used for properly lining up your storage area and the other for unloading.

Spray Dryer

Spray drying equipment of a well-known Danish design is now available in this country through Niro Corporation, an American Firm that has offices at 52 Broadway, New York.

Outstanding feature of the Niro method is the atomizer head. This is a specially designed, high-speed rotary head which ejects the liquid product as a mist into the drying chamber. Circulating hot air seizes the mist as it enters the chamber and instantaneously evaporates its water content. The dry content falls to the bottom of the chamber as a fine powder and is funnelled out as a finished, easily soluble product ready for packaging and sale.

The high speeds attained by the atomizer head and its special design are principally responsible for the efficiency of the unit. The atomizer produces a consistently uniform powder and the drying is accomplished at a temperature so low that the original properties of the product are in no way impaired. This equipment is able to produce powders with very high bulk densities when it is required.



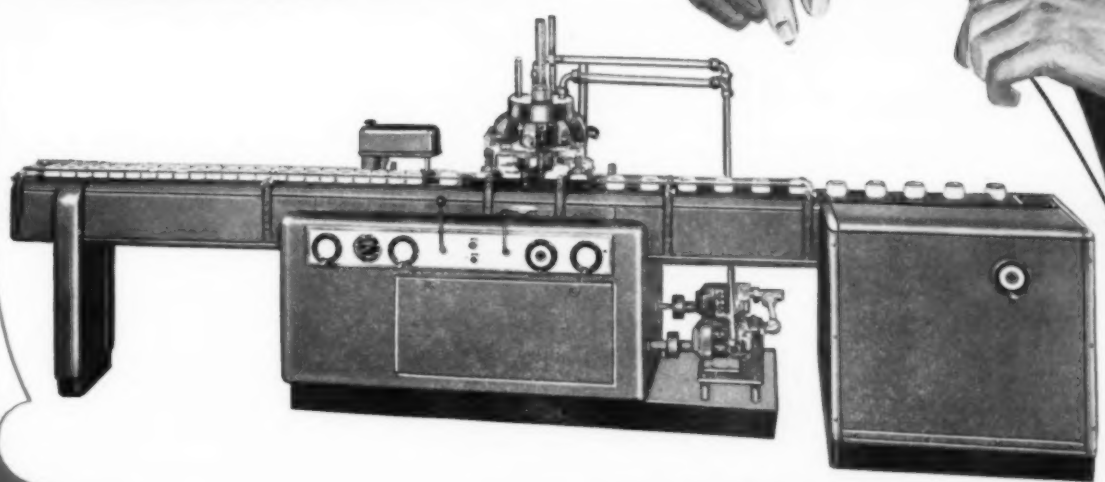
Reliable, trouble-free operation is a result of the equipment's two-stage design, the company states. Pipes, ducts and other parts of the system do not clog even when drying viscous substances of pasty structure or under other severe working conditions. Operation of a Niro installation requires a minimum amount of attention.

Supplementing a comparatively low first cost, it is claimed that the system may bring about important simplifications of production methods in processing of drugs, medicines and similar products.

WHIP YOUR EVERY FILLING PROBLEM

It's being done—elsewhere—with the experienced

KIEFER VARI-VISCO FILLING MACHINE



Completely automatic, semi-automatic, hand-fed equipment to clean, fill, close, convey jars, bottles, tins, collapsible tubes.

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Do you want a quick job . . . an accurate job . . . a cost-reducing job? For cosmetics, salves, creams, the Kiefer Vari-Visco is "it" for a volumetric fill.

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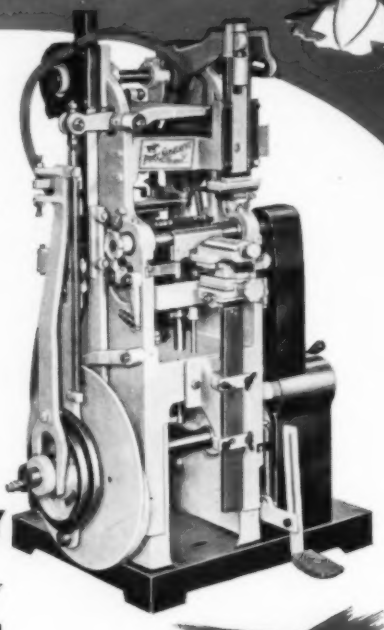

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PONY LABELRITE*

"X" marks the spot where ONE girl *and* the Pony Labelrite do ALL the work a labeling machine should do!

APPLIES EVERY LABEL FAULTLESSLY

eliminates the work usually done by girls who "reposition" labels in checking proper register . . . and *also* eliminates the need for "wiping" off excess adhesive.

Why put up with mechanical performance that demands *extra* cost to do *clean*, SWIFT, precision registry of labels? It needs but ONE unskilled attendant to take care of ALL these factors when you use a Pony Labelrite—because the Labelrite is DESIGNED to eliminate extra costs, extra help, and "nuisance jobs". Get FACTS. *See* a Pony Labelrite gallop through a day's run . . . *that's* all the proof you'll need!

VACUUM STRAIGHT-LINE LABEL DELIVERY
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TWIN-ROLLER, *MICRO*-GLUE ADJUSTMENT
prevents excess glue.

FULL SURFACE GLUING
eliminates blisters and loose edges.

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1. Turbine head near bottom of tank starts a converging horizontal flow which carries sedimentary material into close-fitting rotor vanes.
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6. No surface boil . . . no vortex . . . NO AIR DRAWN IN.

The Eppenbach HOMO-MIXER is built on an entirely new principle. Whereas ordinary mixers create a vortex in the material that pulls in air, the HOMO-MIXER draws only from the bottom of the tank. Entrapped air tends to cause separation and splitting, and frequently oxidizes the product.

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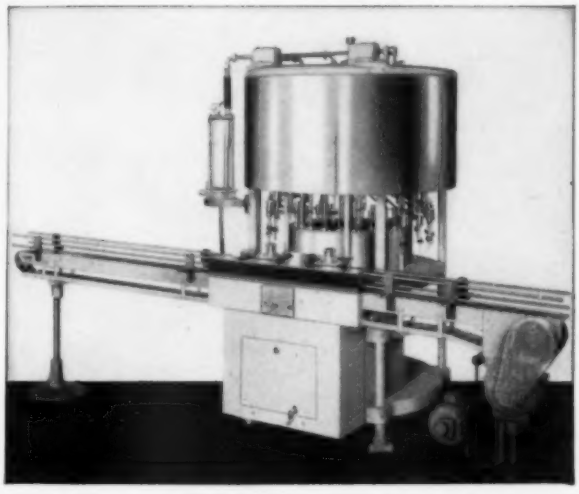

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In 5 standard models. Handle any light or heavy, foamy or syrupy liquids at relatively high rates of speed. Fill to hairline accuracy. Automatic protective controls. Highest type vacuum operation. Perfect automatic timing. Variable speed control, etc. Perfect synchronization with other units. Write for illustrated "Filler Bulletin" featuring outstanding filling innovations.

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Clean and Fill 50 to 75 Gross of Containers Per 8 Hour Day

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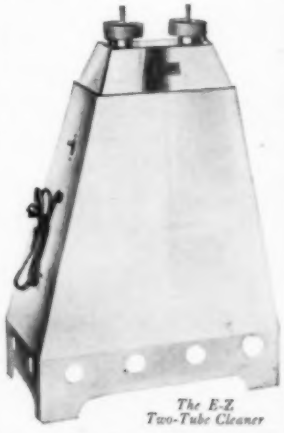
Model B-2 Semi-Automatic VACUUM FILLER

New, improved filling unit handles most any liquid from any size supply tanks. Fills any containers from AGST size to 4" diameter. Has outstanding features.



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A bottle cleaner for cleaning new glass. Efficiently removes foreign matter from new containers by means of compressed air. Furnished with Air Filter ready for connection to customers' air lines. Floor space 27 x 14 in.

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Scores of today's drug and cosmetic fast sellers are making sales history in Brown Packets. Send for a complete range of samples of these packeting successes. Your most detailed questions will be cheerfully answered.

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For the manufacturer who needs fast, accurate, spill-proof hand fillings. Flow of liquid or cream controlled by simple, hand-operated valve.

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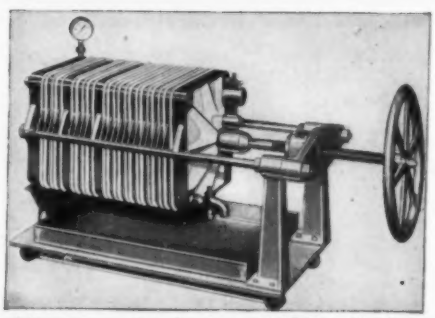

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- HORM Sterilizing Filters are so constructed that all parts coming in contact with liquid are of stainless steel and all other metal parts are of non-corrosive materials. Available in the following sizes: 8", 10" and 13½" sq.

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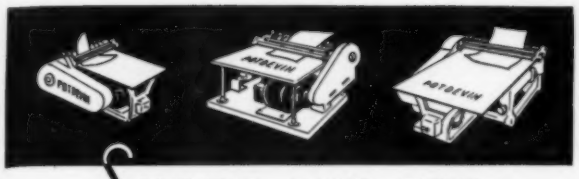

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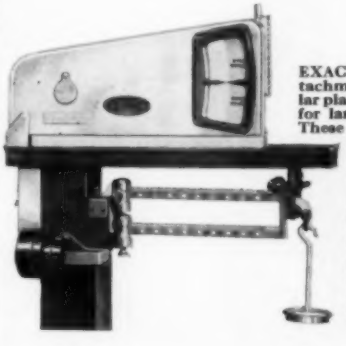

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YOUR TRADE-MARK RECORD

By JOHN H. GRAHAM
International Patent and Trade-Mark Consultant

What Is a Good Trade-Mark?

In past articles we have discussed at length the various factors which make a trade-mark bad or good. Now I have been asked to give examples of good marks. I hesitate always to refer to marks specifically in our own fields to avoid the possibility of being called biased. Sometimes, however, an exception is necessary, as in the present case.

One of the best perfume marks I know of is TWEED. It is the type of mark which has everything. First, it has no suggestion of any form of descriptiveness since "tweed" has nothing to do with perfume or its characteristics. Secondly, it has a subtle meaning which immediately invites the mind to conjure up a mental vision. It is not too hard to go to work on a perfume named "tweed" and come up with a woodsy, tangy fragrance which matches the name. Thirdly, it is a simple word, easy to pronounce, easy to remember and easy to read.

Fourthly, it is a word which is well balanced and lends itself to display on labels, advertising matter etc. Thus, I consider this is an example of a fine mark since it possesses all of the vital factors which go toward a good mark and none of the detriments which react against a mark.

There are of course many ways of pushing a mark forward. A trade-mark may be theoretically bad from the point of view of registration at the Patent Office and yet by earnest endeavor be pushed into the limelight. Choosing a good mark such as "Tweed," however, is a very sensible step since it is both costly and dangerous to try to achieve success with a mark which is inherently bad. There are many dangers, among which is the obvious necessity of bringing suit against infringers which must be done if the mark is to be considered seriously and adequately protected. Now if the mark under consideration is obviously descriptive or very close to the line, there is much greater danger of someone infringing. They may deliberately infringe because they believe you have no right to usurp that descriptive word or they may innocently infringe since they use what they consider is a word common to their trade and thus not a trade-mark. But if you put thousands of dollars behind a mark to promote it, obviously it is poor insurance to ignore such infringements whether innocent or otherwise.

Of course arbitrary marks of no meaning or initial significance are all right. While it is expensive and it takes a long time to build them up, they have many advantages. Perhaps the best example of this is the famous "Kodak" trade-mark. Over the years Eastman has built this mark into a position of prominence throughout the world.

The notation "Kodak" is an excellent mark from all standpoints.

It lacks the advantage so often employed for perfumes, cosmetics etc. of a subtle secondary meaning such as possessed by "tweed." It, however, has all attributes of a fine mark. Note that it is balanced on the "d" with round letters on either side and a terminal "k" at each end. It is easy to pronounce, read and memorize. It is completely arbitrary in meaning and has no real significance of itself and until it is associated with goods and forced into public view.

Over the years few have been clever enough or lucky enough to create such a mark. Of course, many hours of hard work and many dollars have gone into the effort of creating such a success but that effort is always worth-while when the mark merits it, since a good trade-mark is one of the finest salesmen you can buy.

Down the line there are dozens of good marks which should give inspiration and hope to those who are today worrying about the tightening up of the Patent Office Trade-Mark division.

They are definitely getting tougher in Washington and many a fairly good mark is being thrown out which under the 1905 Act would have been registered. Before this new approach, it always seemed that the Patent Office gave the benefit of the doubt to the applicant if there was some disagreement on the issue such as a question of descriptiveness.

Now, it seems that the trade-mark examiners intend to have the last word. This *will* mean better marks of course, but it is disheartening to put a mark which you like into use, use it for two years and then at the end of that time find that registration is finally and completely refused.

Greater care will have to be given to your choice of marks.

What is a good mark, one that can be registered? No one has a full answer. There are too many human elements involved to be able to create a real working formula.

Only by comparison with what has been done before, with a careful check of current trends and legal decisions, is it possible today to avoid to any extent putting money behind a mark which cannot be ultimately registered.

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READERS' QUESTIONS

TOOTH PASTE: I have long been interested in making a dental cream. I have several formulas but none give me the results I want. I would be very much obliged if you will give me a good formula. I cannot use any synthetic detergent. Spain.

A high grade dental cream or tooth paste may be made from the following:

Precipitated chalk, light	**46.0**
Powdered gum tragacanth	**1.0**
Pulverized neutral white soap	**4.0**
Glycerine	**24.5**
Water	**18.7**
Powdered soluble saccharine	**0.1**
Methyl parahydroxybenzoate	**0.1**
Flavor	**0.5**
Alcohol	**5.0**

Mix alcohol and the gum; add hot water, glycerine, soap, sacchairne, preservative and flavor. Mix one-half hour. Mix and sieve the dry ingredients and slowly add them to the liquid. Mix until a smooth white paste is obtained. Mill. The consistency of this paste is slightly heavy. It can be reduced by adding water.

COLD WAVE DATA: I am a young chemist just demobilized from the British Army, and I am about to join an organization which is interested in the manufacture of cold wave solutions. I can find very little information on this subject in the English literature. If you could assist me in any way, I should be very grateful. London.

I should like to point out at once that most cold permanent wave preparations are based on thioglycollates and that the use of such material for the purpose is covered by patents such as U. S. Patents 2350178, 2389755, 2405166. A check of these patents should give you some information at to the technical background of cold wave permanents. The English literature does contain some information on cold wave permanents. An article discussing these products appeared in the February 1945 issue, page 121 of *Soap, Perfumery, & Cosmetics*, which is published in London. Physiologic and toxicologic data is contained in a report by C. P. McCord which appeared in *Industrial Medicine* for December 1946. This, of course, is an American publication. Another report which is along the same lines was published in the *Proceedings of the Scientific Section of the Toilet Goods Association*, Number 7, May 16, 1947. Additional material along the same lines giving the very latest data was published in an article by Goldman, Mason and McDaniel, in the *Journal of the American Medical Association* for May 22, 1948.

ADHESIVE TAPE REMOVER: We are very much interested in formulas for volatile, non-inflammable solvents for removing adhesive tape. Philadelphia.

Several years ago the American Medical Association recommended several suitable preparations. The first of these is 98% dichloromethane. The second is a mixture of 60% carbon tetrachloride and 40% naphtha, plus a small amount of oil of sassafras as a perfuming agent. The third composition is carbon tetrachloride plus a small amount of perfume and color. Of interest in this connection is the use of oil of wintergreen as suggested by Dr. C. J. Jackson. The oil should be applied with a very small cotton swab only to the point of separation of the adhesive from the skin.

SKIN PROTECTIVE AGAINST OILS AND GREASES: Can you provide us with a formula for a preparation to be applied to the hands before working with oil or grease which will aid in removing these materials when the hands are washed. Pittsburgh.

I think the following formula for a protective cream will serve your purpose. It is resistant to oil and grease but can readily be removed by washing with water or soap and water.

Soap flakes	**7.5 Gm.**
Glycerine	**25.0 cc.**
Sodium silicate	**25.0 cc.**
Tragacanth	**0.2 Gm**
Oil of lemon	**0.05 cc.**
Water, to make	**100.0 Gm.**

HAIR LACQUER: We would like to have information on the manufacture of a hair lacquer prepared from shellac and rendered water-soluble by emulsification. Hair lacquers of this type are, as you know, widely used particularly in beauty shops, and we would appreciate it very much if you could send us the working formula for lacquer of this type. Marion.

A product such as you want can be made from:

Bleached shellac	**10.0 parts**
Hot water	**68.0 "**
Borax	**2.0 "**
Eau de Cologne	**30.0 "**
Dye	**Sufficient**

Dissolve the shellac in the hot borax solution, cool, and then add the perfume.

Patent Thoughts and Trends

By THOMAS CIFELLI, Jr., Patent Attorney

Patent Field

The mail man has recently brought so many patents believed to be of interest to *Drug & Cosmetic Industry* readers that this article will dispense with a discussion of a general patent topic and will be devoted entirely to a consideration of some recently-issued patents.

Frankly, it looks as if the cosmetic folks have left the field almost completely to the drug people, as only three cosmetic patents of any general interest were uncovered. In addition, the only other patent news on cosmetics deals with the Wallace and Hand Perspiration Inhibitor patent, U. S. 2,236,387. The U. S. Supreme Court has just heard arguments in the case involving this patent (Arrid) and before very long it is hoped that it will be known whether the patent is good or bad as far as the whole United States is concerned. As of this writing, the patent can be said to be good in and around Chicago but not so good in or around New York, roughly speaking, all as pointed out in the May 1948 issue of this publication.

The patents of special interest issued recently deal with streptomycin, vitamin A, penicillin, and aromatic aldehydes, some of which have musk-like odors.

Streptomycin

Last month's article mentioned that Professor Waksman and Albert Schatz obtained a patent (U. S. 2,449,866) covering streptomycin and a method of making it. However, no discussion of it was then possible because the patent was not then at hand.

The inventors note that they obtain streptomycin by cultivation of strains of *Actinomyces griseus* under certain controlled conditions. This organism was first isolated from the soil and characterized by Waksman (Soil Science, Vol. 8, page 71-1919).

In general the process involves cultivating the indicated strains under either stationary or submerged aerobic (viz., submerged growth with agitation and aeration) conditions, in a nutrient medium containing a growth-promoting factor of the type present in meat extract and corn steep liquor, separating the organism growth from the culture broth, treating the culture broth with activated charcoal to adsorb the active product, eluting the adsorbate with low normality alcoholic mineral acid and recovering streptomycin from the eluate.

Those who are interested in the properties of streptomycin will note that about all the patent says on this score is that streptomycin "is thermostable; has the properties of a base; is soluble in water, acid alcohol and dilute acids but is insoluble in ether and chloroform; has a low toxicity to animals; and is strongly active bacteriostatically against many gram-positive and gram-negative bacteria." In this connection, the patent gives some comparative bacteriostatic data on streptomycin and streptothricin and states that the data on the former were obtained with the "crude and hence less concentrated substance." The comparative data follow:

Comparative bacteriostatic spectra (based on ash free dry material)

Organism	Gram stain	Units of activity per gram ash-free dry material: Strep-tomycin X1000	Strep-tothricin X1000
B. subtilis O	+	125	500
B. mycoides O	+	250	<3
B. mycoides 317-911	+	20	<3
B. cereus	+	30	<3
B. mesentericus	+	15	...
B. megatherium	+	100	150
S. aureus	+	15	200
S. lutea	+	100	150
M. phlei	+	100	50
M. tuberculosis	+	30	...
Phytomonas pruni	—	100	400
Listerella monocytogenes	—	10	...
Shigella gallinarum	—	...	150
E. coli	—	25	100
S. marcescens	—	25	5
A. aerogenes	—	10	50
P. vulgaris	—	10	50
S. aertrycke	—	2.5	...
S. schottmulleri	—	...	50
Ps. fluorescens	—	2	<3
Ps. aeruginosa	—	1	<3
Cl. butylicum	—	3	<3

The details of the preparation of streptomycin are given in three examples, the first of which is reproduced here.

Example I

A medium is prepared having the following composition:

	Per Cent
Glucose	1.0
Peptone	0.5
Meat extract	0.3
NaCl	0.5
Tap water.	

This medium is distributed in appropriate vessels to a depth of 1-2 inches, sterilized at 10 lbs. steam pressure for 45-50 minutes, and then cooled.

The medium in each vessel is then inoculated with a heavy aqueous suspension of spores of a strain of *Actinomyces griseus*, and the inoculated media are maintained at an incubation temperature of 22-28°C. for 10 days. The growth is then filtered off and the filtrates are combined for further treatment.

To a batch of approximately 10 liters of filtered broth is added 150 gms. of activated charcoal. The mixture is stirred continuously for about five minutes and is then filtered. The slightly yellowish (almost colorless) filtrate is discarded and the charcoal residue is washed several times with distilled water and finally with 95% ethanol. The washed material is then suspended in 1.5 liters of 95% ethanol, made 0.15 normal with hydrochloric acid. The suspension is stirred for about an hour and allowed to stand in the cold for about 10 hours more with occasional stirrring. The suspension is then filtered, the charcoal residue discarded, and the yellowish clear filtrate thus obtained is poured into 10 liters of ether, with stirring. A brown-colored aqueous layer separates and is drawn off. The alcohol-ether solution is washed with 100 cc. of water and the brown aqueous layer is drawn off and added to the first aqueous layer. The aqueous solution is neutralized to pH 6-7 with dilute sodium hydroxide and any precipitate that forms is filtered off and discarded. A faintly colored aqueous solution containing streptomycin is thus obtained.

The other two examples given in the patent also terminate in aqueous solutions containing streptomycin. The only product claim reads simply: streptomycin.

Penicillin

Penicillin is really coming into its own as a contributor to the unfolding patent literature. While some patents dealing with the production of this

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drug have been issued in the past few years, the number took quite an upturn recently, Merck and Lilly accounting for seven patents between them during the last month.

Merck Penicillin Patents

The Merck patents (U. S. 2,448,790 and 2,448,791) were issued on inventions made by J. W. Foster and L. E. McDaniel. These patents involve the so-called submerged or deep culture process of making penicillin. Specifically, the Merck inventors subject *Penicillium notatum* or *Penicillium chrysogenum* to an aqueous medium maintained at a pH of 6.0 to 8.5, the contents being aerated and/or mechanically agitated. The nutrients include mineral salts such as sodium, potassium, magnesium nitrates, urea, ammonium salts and corn steep liquor. As a source of carbon and energy, substances such as carbohydrates, glycerol and corn steep liquor are used. When a medium comprising nutrient mineral salts and substances such as glycerol, brown sugar, dextrose, molasses, sucrose and starch are used, the rate of penicillin production is promoted if certain complex organic nitrogenous substances are also used. These substances are corn steep liquor, soy bean cake meal, cotton seed meal, yeast extract and Pen. autolysate.

The claims of U. S. 2,448,790 appear to be limited to processes involving the concurrent use of both inorganic nutrient salts and either molasses or brown sugar in the nutrient medium. The claims of U. S. 2,448,791 all call for the use of cotton seed meal.

Lilly Penicillin Patents

Five recent patents (U. S. 2,449,191 to 2,449,195, inclusive) involving O. K. Behrens, J. W. Corse, Q. F. Soper and R. G. Jones, all deal with the same problem tackled by the Merck inventors, viz. to speed up the deep culture penicillin process.

The Lilly inventors found that by adding certain substances to the nutrient media the rate of penicillin formation was increased. U. S. 2,449,191 covers as a new compound, N-phenylacetyl-alpha-amino-beta, beta-dimethylacrylic acid. Its use to speed up the penicillin process was previously described in U. S. 2,440,355. U. S. 2,449,192 covers N-alkenyl phenylacetamides, such as N-allyl-, N-crotyl-, and N-(3, 3 dimethylallyl)-phenylacetamide as new compounds. U. S. 2,440,357 previously described the speed-up properties of these compounds. U. S. 2,449,193 covers a method of producing penicillin by using N-(2, 2-diethoxyethyl)-phenylacetamide as the accelerator in the nutrient. U. S. 2,449,194 covers N-(1, 3-dihydroxy-2-propyl)-phenylacetamide as a new compound. U. S. 2,449,195 covers the use of the latter compound in a culture medium in penicillin production.

The reaction accelerators apparently need only be employed in very small amounts, less than 1 per cent of the nutrient medium being effective and preferably less than 0.3 per cent being used, according to the patents.

Perfumes and Cosmetics Materials

Carpenter and Easter, of Burton T. Bush, Inc., just won three patents on new aromatic materials. U. S. 2,450,877 covers 3-tertiary-butyl-4-alkoxy benzaldehydes, which are said to have somewhat empyreumatic odors of the "cuir de Russe" type. U. S. 2,450,878 deals with 3-tertiary-butyl-4-alkoxy-5-nitro benzaldehydes, which have strong musk-like odors. U. S. 2,450,879 relates to 2, 4-di-tertiary-butyl-5-methoxy benzaldehyde, which while it does not possess a nitro group is said to have a very persistent musk-like odor.

Other Patents

U. S. 2,434,429—**Wallace & Tiernan—Swimming pools are disinfected with chlorine plus bromine or iodine.**

U. S. 2,443,473—**Research Corp.—Phosphoric Acid Ester of Vitamin A.**

U. S. 2,443,485—**Rutgers Research—Streptothricin, a new antibiotic. Prepared from cultures of Actinomyces lavendulae.**

U. S. 2,443,487—**Hoffman-La Roche—Synthesis of Compounds of the Ascorbic Acid series.**

U. S. 2,443,544—**E. J. Saucier—Hair Curler and Clip Assembly.**

U. S. 2,443,583—**H. H. Mottern & R. E. Buck—Ascorbic Acid Manufacture.**

U. S. 2,443,598—**Parke, Davis—3-Amino-4-Carbethoxy-2-Alkyl Derivatives of Thiophene.**

U. S. 2,443,778—**M. J. Romansky—Preparations for Penicillin Therapy. Contain sterilized vegetable oil and beeswax.**

U. S. 2,443,796—**Geigy—Diethylamino Ethyl Ether of Diisopropyl Carbine.**

U. S. 2,443,919—**U.S.A.—Fermentation Process for Alpha-Ketoglutaric Acid.**

U. S. 2,443,956—**Am. Cyanamid—Free-flowing Crystalline Sulfadiazine Method.**

U. S. 2,443,962—**E. R. Squibb—Method of Producing an Antibiotic from Aspergillus flavus.**

U. S. 2,443,989—**U. S. A.—Penicillin Method.**

U. S. 2,444,005—**Am. Cyanamid—Pterins Preparation.**

U. S. 2,444,024—**Sterling Drug—6-Cycloalkylmethyl-2-Thiouracils.**

U. S. 2,444,395—**E. R. Squibb—Alkyl-Amino-Alkyl Para-Alkoxy-Benzoates.**

U. S. 2,444,441—**F. Grinham—Deodorizer for Toilet Bowls.**

U. S. 2,444,816—**Monsanto—Acetophenone process, involving passing oxygen gas through ethyl benzene in the presence of a catalyst and methylphenyl carbinol and further oxidizing to form acetophenone.**

U. S. 2,444,926—**U. S. Attorney General—Sulfonamides.**

U. S. 2,445,006—**Schering Corp.—Steroid Keto Hydroxy Acids and Their Polybasic Esters. Intermediates for Hormones of the Adrenal Cortex.**

U. S. 2,445,128—**U. S. A.—Biological Process for the Production of Riboflavin. Ashbya gossypii are cultivated under aerobic conditions in a growth medium (0.5 to 10.0 per cent fermentable carbohydrate, a proteinaceous material and a lipid).**

U. S. 2,445,208—**Wyeth—Aqueous solutions of Riboflavin. Contain l-tyrosine amide or its acid-addition salts as solubilization agents.**

U. S. 2,445,242—**Aktiebolaget Ferrosan—Process for Producing a 4-Amino Salicylic acid.**

U. S. 2,445,366—**U. S. A.—Ophthalmic Compositions, comprising 2, 3-dimercapto-propanol, an antioxidant, thiamine hydrochloride.**

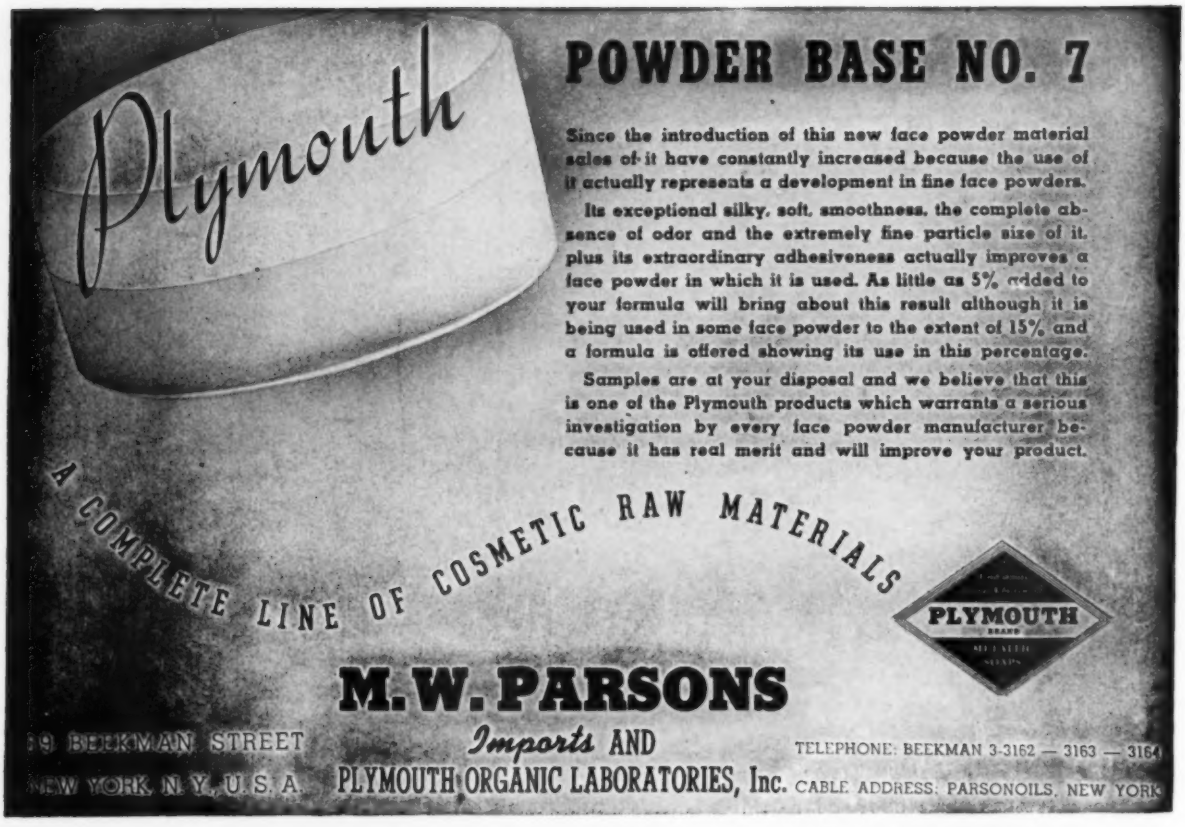
U. S. 2,445,393—**Societe des Usines Chimiques Rhone Poulenc—4-Dialkylaminomethyl 1.3-Dioxa-Cyclopentanes and Their Quaternary Salts.**

U. S. 2,445,685—**Colgate Palmolive Peet—Cake Make-up Container.**

U. S. 2,445,748—**U. S. A.—Penicillin process, involving X-ray irradiation.**

U. S. 2,445,817—**Winthrop-Stearns—Preparation of Leucine.**

Note Copies of U. S. patents may be obtained for 25 cents each from the Commissioner of Patents, Washington 25, D. C.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Compounder's Corner

Correction

"More Dermatologic Formulas"—the first abstract to appear in the September Compounder's Corner—was taken from the writings of Dr. Herman Goodman in the Merck Report for July 1948, not from the March Report as stated.

Non-Discoloring Glucose Solutions

In a report of experiments on glucose solutions, H. Koefoed (*Arch. pharm. Chemi* 51:371, through *Chem. Abstr.* 42:5490, 1948) points out that such solutions for injection are easily discolored on heating. He found that in a series of freshly prepared 50 per cent glucose solutions, the PH varied from 7.0 to 5.2. In heat-treated parenteral solutions, the pH varied from 5.6 to 4.0. However, solutions adjusted to pH 3.7 or less prior to heating did not discolor when treated at 100°C. for one hour or by autoclaving at 120°C. for 20 minutes. It was observed that 50 per cent glucose solutions adjusted to pH 3 do not cause more discomfort to the patients than unadjusted glucose solutions. Koefoed found that 50 per cent glucose solutions can be autoclaved at 120°C. for 20 minutes without discoloration by the addition of 1 ml. of 0.1 Normal hydrochloric acid per 100 ml. of solution.

Liquid Shaving Soaps

In a comprehensive, two-part review of liquid soaps, C. V. Cardew (Soap, Perf. & Cosmetics 21:574 to 692, 1948) gives some interesting information on the production of liquid shaving soaps. Packaging is an important consideration with such items and the most desirable product probably is a fairly fall-flowing cream packed in a narrow-orifice bottle or some special dispensing device. According to Cardew the advantages of a good liquid shaving soap are rapid welting of the skin, quick lathering and emolliency. Two main types of liquid shaving soap have been suggested: the first, a clear solution of potash soaps with glycerine; the second, a superfatted emulsion of the consistency of milk. The latter apparently gives the most satisfactory product, considering the type of container required and the method of use.

The appearance of the product also depends upon the choice of ingredients, i.e., whether a clear liquid is obtained or a milky white emulsion. Unfortunately, large amounts of glycerine and alcohol clarify the liquid soaps at the expense of lathering power. For this reason milky emulsions built up with stearic acid are used considerably. Both kinds are described. A formula for a clear soap follows:

Tallow	30
Coconut oil	12
Caustic potash lye, 50° Be.	12
Potassium carbonate, 4 kg. dissolved in 15 kg. of water	
Glycerine	35
Alcohol	30

The tallow and coconut oil are stirred with the caustic soda at a temperature of 55–60° C. (130–140°F.). After saponification the warmed potash solution is stirred in, and the glycerine, also warmed, and finally the alcohol are added. When sufficiently cool, perfume is mixed in. Allow to stand at as low a temperature as possible, then filter. Olein and other suitable fat stocks can be used.

The following formula is for a creamy liquid shaving soap prepared with stearic acid, which gives an excellent lather and therefore leads to quick, smooth shaving:

Stearic acid	8.4
Coconut oil	8.4
Caustic potash lye, 50° Be	8.1
Glycerine	8.4
Alcohol	2.4
Water	48.0
Petroleum jelly	0.65
Cymene	0.65

Warm the caustic potash and alcohol together to about 70° C. (158° F.). Warm the mixture of stearic acid, coconut oil, petroleum jelly, and cymene to the same temperature, and stir the fat mixture in several portions into the alcoholic caustic potash solution, allowing for the increase in volume. Saponification is very rapid, because of the presence of alcohol. The viscosity of such a soap can be regulated as desired, by a slight or great superfatting with stearic acid. If the soap is adjusted to an excess alkalinity of 0.01 per cent, the consistency, after addition of the prescribed amount of water, will be about the same as that of milk, and the color a pure white.

In place of petroleum jelly and cymene, 0.5 per cent lanolin can be included, especially if about 1 per cent of auxiliary emulsifiers, such as cetyl alcohol, glyceryl monostearate etc., is also incorporated in the formula.

Potentialities of Wool Waste Protein

Recently the Botany Mills, Inc. of Passaic, N. J. announced the development by its research chemists of a potentially important new protein product, Botanein P, which may be suitable for taking orally to accelerate the growth of epithelial tissue such as hair and skin. Known to contain 17 amino acids, nine of which are indispensable to body growth, the new compound has a cystine content of almost 12 per cent, higher than any other protein with the exception of insulin. In addition to its possible importance as a pharmaceutical in cases of burns or other injury to body surfaces, Botanein P has a variety of potential uses in widely diverse fields. Among human and general food uses indicated are: in cosmetics, especially suntan creams; as a food ingredient to accelerate and improve the growth of fur, feathers, etc. on animals; as a super-nutrient for cattle; as a medium for the growth of micro-organisms, e.g. yeast; as a research chemical, particularly in clinical research (e.g. diabetes, arteriosclerosis, etc.) as a starting material in the preparation of amino acids or protein hydrolysate mixtures; and as an adsorbing agent to be used in the clarification and purification of beverages.

Derived from wool waste, Botanein P is the result of years of research by Botany chemists. It is a yellow to light-tan amorphous solid, with little odor and no taste, insoluble in water but soluble in dilute alkalies and readily digested by enzymes such as trypsin, a proteolytic enzyme present in the pancreatic fluid. A brochure containing detailed information has been prepared for chemists and research workers.

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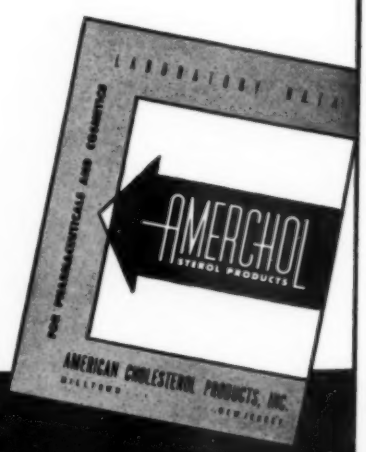

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Preventing and Treating Sunburn

In the English publication, Practitioner (161:49, 1948), *E. W. P. Thomas discusses the prevention and treatment of sunburn. He observes that prophylactic measures include avoidance of the sun, the wearing of protective garments and the use of protective preparations. The latter are of two kinds:*

(1) "sun shade" preparations which screen the skin against pigmentation as well as the burn producing rays and, (2) sun-tan preparations which filter out the sunburn rays and allow only the longer pigment-forming rays to pass. Dark colored cosmetics, face powders and creams reduce the passage of moderate ultra-violet radiation but prevent suntan. Calamine lotion has a screening value by forming a physical barrier. A lotion made to the following formula acts similarly:—

Zinc oxide	**60 min.**
Glycerine	**1 oz.**
Rose water, to make	**3 oz.**

A more effective protective of the "sun-shade" type may be made to the following:

(a) Kaolin (in light powder)	**300 min.**
Calamine lotion, to make	**10 oz.**
(b) Strong solution of ferric chloride	**30 min.**
Water, to make	**5 oz.**

Pour (b) into (a), stirring hard. Stand for twenty-four hours and add 30 minims of peanut oil.

"Sun-screen" compounds which filter ultra-violet light are sometimes used for protective purposes. Para-aminobenzoic acid, for example, has an absorption band in the ultra-violet spectrum which embraces all the dangerous rays, and certain workers regard this compound as effective against even such strong ultra-violet radiation as is met with on glaciers or on the ocean. A cream containing 15 per cent of para-aminobenzoic acid or a 10 per cent solution of the compound in industrial spirit is recommended. A powdery white film that is left on the skin when the alcohol evaporates from the solution should be rubbed in. The preparations should be applied every two or three hours during exposure. Solar urticaria and darkening of freckles cannot be prevented by the use of para-aminobenzoic acid. Many vegetable oils possess some screening action, sesame oil being possibily the most effective. Mineral oils are of no value. The application of vegetable oil before expsoure is also helpful in keeping the skin supple. A "sun-tan" oil may be prepared as follows:

Menthyl salicylate	**10**
Sesame oil	**50**
Liquid paraffin	**40**

For the treatment of sunburn, calamine lotion (aqueous or oily), or moist compresses of 1 per cent aluminum acetate or weak lead lotion should be applied. The areas should be cleansed with peanut oil and not with soap or water. Measures should be taken to prevent infection. Infected areas may be mopped with a 1:4,000 solution of mercury perchloride. Blisters should be snipped by a physician and painted with a 1 per cent aqueous solution of crystal violet or the entire surface thinly sponged with 0.5 per cent crystal violet in calamine lotion. If itching occurs an antihistamine agent should be given orally.

New Adhesive Tape Remover

In patch testing it is important that the adhesive tape plaster has good sticking qualities. Unfortunately, however, the better the tackiness of the adhesive, the more marked is the traumatic reaction of removal. Hence, the importance of the observation of Z. W. Glick, G. Weissberg and S. D. Peck (*J. Invest, Dermatol.* 10:399, 1948) on the value of propylene glycol ethyl ether as an adhesive tape remover. With the advantage of being non-inflammable and non-toxic, it was tried as remover in a series of tests in which over 300 patches were applied to more then 50 patients. As a result of these studies, they concluded that the use of propylene glycol ethyl ether is a practical aid in carrying out patch tests. It renders the removal of adhesives relatively painless and, most important, it reduces the traumatic reaction of removal to a very large extent.

Cosmetic Preservatives

In the Retail Chemist (19:48, June, 1948) it is noted that cosmetics preservatives must be selected with regard to the principal requirements of non-toxicity, non-irritation, and the absence of odor and color; further, preservatives that are readily absorbed into the oil phase should be avoided. Some ingredients of cosmetic preparations, for instance the essential oils, and the alcohols employed in perfumes have marked antiseptic properties. Boric acid, borax and the perborates are the most harmless, yet efficient preservatives in general use, and may also be employed to adjust the pH. Among the solvents, glycerine and ethylene glycol, in addition to alcohol, are satisfactory from the germicidal standpoint. Antiseptics that may be used in addition are para-hydroxybenzoic acids, its esters and salts, at amounts of 0.05–0.2 per cent; and chlorinated phenols, preferably in form of their sodium salts, at a rate up to 0.25 per cent.

Improved Lemon Syrup

When first made, citric acid syrup, U. S. P., sometimes called lemon syrup, is not a perfectly brilliant preparation, the faint opalescence being due to a separation of lemon oil from the lemon tincture. Even under optimum storage conditions as directed in the United States Pharmacopoeia, the syrup becomes cloudy, shows mold growth and acquires a terebinthinate odor and taste in a relatively short time. Further, the odor and taste of lemon in the preparation are not pronounced and, for that matter, not very suggestive of the fresh citrus fruit.

Because of these faults and because citric acid syrup has not fulfilled the requirements of a pharmaceutically elegant preparation, M. J. Stoklosa (*J. A. Ph. A.*, Pract. Ed. 9:556, 1948) studied ways to prepare a lemon syrup that would possess a fragrant and acceptable odor and taste and that would retain its original brilliancy and natural fragrance under improved storage conditions.

Lemon tincture	**50 cc.**
Citric acid	**5 Gm.**
Purified talc	**15 Gm.**
Sucrose	**820 Gm.**
Distilled water, sufficient quantity, to make	**1000 cc.**

Triturate the purified talc with the lemon tincture and citric acid, and gradually add 400 cc. of distilled water. Then filter, returning the first portions of the filtrate until it becomes clear, and wash the mortar and filter with enough distilled water to make the filtrate measure 475 cc. Add the sucrose to the clear filtrate, and immediately place the product under refrigeration.

Storage—Preserve lemon syrup in well-closed containers under refrigeration at a temperature of approximately 2°C.

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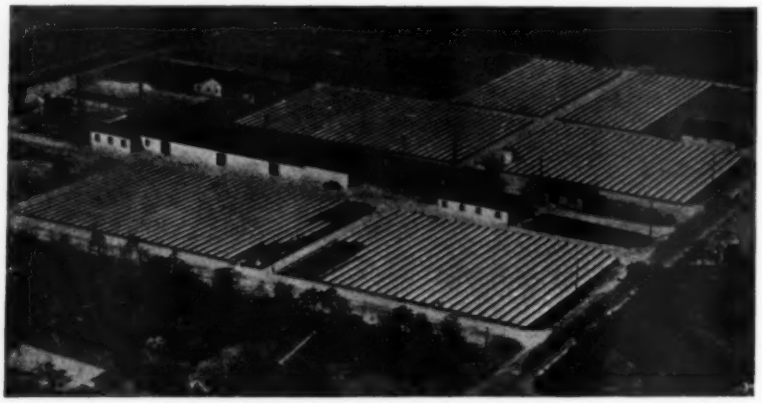

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Advancing Therapy

Evaluation of New Dermatologic Drugs

A comprehensive evaluation of yeast, tyrothicin, chlorophyll and nitrofurazone in the treatment of pyoderma and infective allergic cutaneous diseases has been made by H. M. Johnson (*Arch. Dermat. & Syph.* 57:349, 1948). In summarizing his observations he reports that yeast (Torulospara utilis variety major) - impregnated g u a z e dressings were used for the treatment of 16 patients with acute to chronic pyoderma. The antibacterial properties of this yeast suggest unusual healing power. The mode of application and its troublesome manufacture render its clinical use undesirable.

Tyrothricin ointment was used for the treatment of 24 patients. This drug was effective for superficial impetiginous lesions, but had no value for ecthyma and sycosis vulgaris. The drug is of little practical value in the treatment of ordinary diseases of the skin.

Chlorophyll offers a unique physiologic approach to the topical treatment of pyoderma, burns, ulcers and allergic sensitizations of the skin. It has good possibilities as a topical dressing, as it is a bland soothing nontoxic, cell-stimulating biotherapeutic agent.

The nitrofuran compounds (nitrofurazone was used in the series described are effective as antibacterial preparations for wound and surface infections. This new chemotherapeutic agent closely parallels the clinical results of penicillin ointment.

Value of Protein Hydrolysate Therapy for Peptic Ulcer

Considerable interest has been focused on the treatment of peptic ulcer with protein hydrolysate. Of great importance, therefore, are the findings reported by E. E. Woldman and his associates (J. A. M. A. 137: 1289, 1948) with respect to the value of such therapy in this condition. Following observations on fifty subjects, they have reached the following conclusions: Additional proteins are not an important part of treatment for peptic ulcer if the patient is receiving a well balanced diet.

A single dose of protein hydrolysate causes a decrease in the free acid and an increase in the total acid of the stomach. The period of neutralization v a r i e s w i t h t h e amount of protein hydrolysate administered into the stomach. There is a sharp rise in the free acidity in the stomach after the period of neutralization with protein hydrolysate, and the amount of free acid reaches a higher level than the initial level during the fasting state. Multiple doses of 25 Gm. of protein hydrolysate every hour will cease to neutralize free hydrochloric acid in the stomach. The continuous drip of a 10 per cent solution of protein hydrolysate fails to neutralize free hydrochloric acid in the stomach.

Protein hydrolysate delays the emptying time of the stomach two hours when given as a single dose. Ulcer pain continued for twenty-four to seventy-two hours while patients were treated with protein hydrolysate. The ulcer pain disappeared i m m e d i a t e l y in the patients receiving aluminum hydroxide gel.

Recurrence of the ulcer within a short period after treatment is commoner during treatment with protein hydrolysate. Complications such as hemorrhage and perforation, have been reported to have occurred while patients were being treated with protein hydrolysate, but there were no such complications resulting from the use of aluminum hydroxide during the past twelve years.

In brief, these workers believe that protein hydrolysate is of value only as a food, but has little value as a therapeutic agent for peptic ulcer.

Penicillin in Tetanus

The clinical picture of generalized tetanus has been known for thousands of years; its causative agent was discovered over sixty years ago; almost perfect methods of prophylaxis are known and being practiced, and yet the disease remains as one of the most dangerous infectious complications of wounds, because of the inadequate methods of treatment. In view of the inadequate therapeutic measures available for the management of the disease, the favorable reports on the use of penicillin and the demonstration that it is an antibiotic for *Clostridium tetani in vivo*, R. S. Diaz—Rivera, L. R. Deliz and J. Berio-Saurez (*J. A. M. A.* 138:191, 1948) decided to give the antibiotic a fair trial in a group of 59 cases of tetanus. On the basis of their observations, it was concluded that penicillin is a useful adjuvant in the treatment of the disease. The gross mortality rate was 20.3 per cent, the mortality rate among those patients that received a fair trial with penicillin being 17.6 per cent.

The favorable action of the drug may be attributed to its antibiotic property against the tetanus bacillus, that, by hindering its growth and multiplication, eliminated or paralyzed the production of the toxin. Penicillin may also act as an antibiotic for other bacteria, preventing or curing already established complications, such as bronchopneumonia. Penicillin is considered useless in the prevention of convulsions and in the elimination of the free toxin in the body or the already fixed toxin in the cells of the central nervous system. Nonetheless debridement of infected wounds, maintenance of proper hydration and electrolyte balance, good nutrition and sedation are considered as important as the administration of antitoxin or penicillin in the treatment of tetanus.

Emulsifier Improves Fat Absorption

According to C. M. Jones and his associates (Ann. Int. Med. 29:1, 1948) the use of an emulsifying agent, polyoxthene sorbitan monooleate, to lower the surface tension of dietary fats, represents a new approach to the control of steatorrhea. Through the action of the emulsifier the total surface area of lipoid material presented to the

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intestinal villi is increased by the reduction in the size of the fat globules. In the studies made by Jones and his coworkers, patients with serious malnutrition associated with celiac disease, sprue, chronic inflammatory diseases of the jejunum or ileum, or anastomosis in the upper gastrointestinal tract were given 1.5 Gm. of polyoxthene sorbitan monooleate three times a day. Without exception absorption of fats or fat-soluble substances from the small bowel was improved and the amount of fat in the feces was reduced.

New Glycoside from Arrow Poison

Niaarin, a compound obtained, from the latex of the South American tree, *Ogcodeia ternstroemiiflora* has been employed successfully in the treatment of congestive heart failure, according to K. Mezey and his associates (*J. Pharmacol. & Exper. Therap.* 93:223, 1948). The extract, which is used by Columbian natives as an arrow poison, has chemical and pharmacological properties similar to those of the cardiac glycosides. The material has no curariform activity and it is like strophanthin in its rapidity and brevity of action. Seven patients were treated with 0.5 to 0.75 mg. of niaarin daily for two days and then with 0.25 mg. daily for two or three days more. There were substantial drops in heart and respiratory rates, venous pressure and circulation time within twenty-four hours after beginning the niaarin treatment. No side effects were noted. However, intravenous administration is necessary because the drug is poorly absorbed from the gastrointestinal tract.

Multi-Vitamin Therapy in Syphilis

In their preliminary report in the Journal of the Medical Society of New Jersey (45:38, 1948), P. R. Kline and J. J. Colavita point out that the administration of multiple vitamins has become an established procedure as part of the treatment of many infections of the skin and mucous membranes. The successful treatment with vitamins of pellagrous dermatitis, cheilosis, acne, keratosis pilaris, lupus vulgaris and lupus erythematosis are well known examples. Similarly polyvitamin deficiencies are common complications of syphilis, both as a direct result of the disease itself and as a consequence of therapy. Because of this fact, a new injectable multi-vitamin preparation combining oil-soluble and water-soluble vitamins in aqueous solution has been used in conjunction with antiluetic therapy in 25 clinic patients and 20 hospital patients over a period of 8 months. This preparation (Vi-Syneral, Injectable) is unique in that it combines the oil-soluble vitamins A, D and E, together with the water-soluble ascorbic acid and vitamin B factors: thiamine, riboflavin, niacinamide and pyridoxine in a single aqueous solution. The lipoid vitamins A, D and E are solubilized by means of a non-toxic derivative of a sugar ester (sorbitan monolaurate derivative) which brings these fat-soluble substances into such a high degree of dispersion that the particle size becomes small enough to approach that of a true solution.

They found that in sharp contrast to the incidence of complications with antiluetic therapy alone, there were no significant reactions in any of the patients who also received the polyvitamin injections. No urticarial, "id" or Herxheimer reactions occurred. In addition, several patients with dermatoses long resistant to orthodox dermatologic therapy, responded dramatically to parenteral administration of the polyvitamin preparation.

Calcium Injections for Delirium Tremens

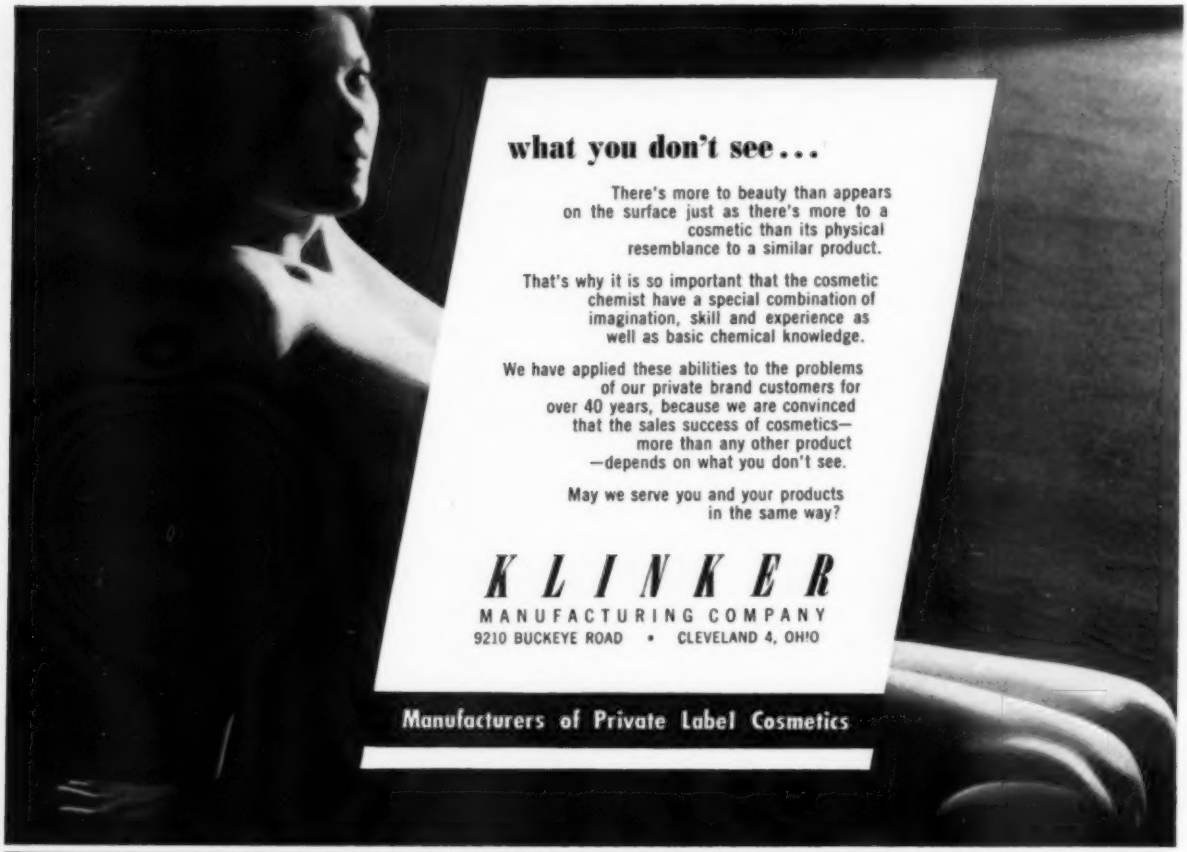
Z. Klimo (*Praxis* 37:135, 1948) is of the opinion that support of the circulation is of greatest importance in the treatment of delirium tremens, since death in delirium seems to be largely a result of failure of circulation. It has been proved in experiments that the calcium content of the blood is of vital importance for cardiac function. Furthermore, calcium is valuable in pneumonia that may complicate delirium and has a favorable effect on the nervous system. These considerations induced the author to resort to the parenteral administration of calcium in 29 patients with delirium tremens. The patients were given daily from 40 to 60 cc. of a calcium preparation intravenously and intramuscularly. For the intravenous administration a 20 per cent calcium preparation was used and for intramuscular administration a 10 per cent solution. Calcium therapy was combined with the administration of vitamin B_1 and ascorbic acid and with small doses of cardiac stimulants. In most patients improvement became evident on the second day of treatment.

Para-Aminosalicylic Acid in T. B. Therapy

The value and limitations of paraaminosalicylic acid therapy in tuberculosis is indicated in the study made by L. Pagaz (Schweiz. med. Wenschr. 78:332, 1948). Most of the patients treated had a progressive form of tuberculosis and a positive sputum. Internal treatment with divided doses of 10 to 15 Gm. per day, continued for a week and then followed by a week free of treatment, was the method most commonly employed. This treatment was usually continued for several months. Improvement was observed in from 60 to 70 per cent of the patients with pulmonary tuberculosis. There was improvement in the general condition, increase in weight, decrease in temperature, improvement in the sedimentation rate and decrease in the number of bacilli in the sputum. A patient with renal tuberculosis was free from bacilli after two weeks and free from symptoms after eleven weeks. However, paraaminosalicylic acid did not pass the crucial test; it did not save 4 patients with miliary tuberculosis and 3 with meningitis. Favorable results were obtained in the local treatment of empyemas and abscesses by means of a 10 per cent solution of the drug.

Adhesive Tape Irritation

The experiments carried out by S. M. Peck, H. Rosenfeld, K. K. Li and A. Glick (*J. Investig. Dermatol.* 10:367, 1948) indicate that the bacteria of the skin surface play a role in the irritation produced by adhesive tape. The incorporation of bactericidal and bacteriostatic agents tends to eliminate the type of adhesive tape irritation in which the bacteria play a role. This was clearly demonstrated in the case of adhesive tapes contained zinc propionate and zinc caprylate. It was found that an adhesive tape containing the fatty acid salts showed much less tendency to produce irritation than one which did not contain such acid salts. In addition, adhesive tape containing fatty acid salts tended to adhere more closely to the skin; it showed less tendency to develop wrinkles; when it was removed, it did not have a slimy deposit on its under surface.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Patent Thoughts and Trends

(*Continued from page 657*)

U. S. 2,445,898—Hoffmann-La Roche—Oxidation of Barbituric Acid to Alloxan.

U. S. 2,446,102—Merck—Acid Salt of Streptomycin and an alkaline earth metal halide.

U. S. 2,446,116—U. S. A.—Process of Purifying Carotene Contaminated with Chlorophyll and Xanthopyll.

U. S. 2,446,192—Merck—Preparation of Threonine.

U. S. 2,446,408—General Electric—Preparation of Anhydrous Ether.

U. S. 2,446,503—Hoffmann-La Roche — 5 - Monoalkyl - barbituric Acids Process.

U. S. 2,446,504—Hoffmann-La Roche — Carboxylated Monosubstituded Barbituric Acid.

U. S. 2,446,505—Doughnut Corporation—Mold Inhibitors. The mono- and diesters of 1, 2-propylene glycol or dipiopylene glycol and the straight chain, saturated, monocarboxylic acids having 2-10 carbon atoms inhibit growth of microorganisms responsible for ropiness in cereal products.

U. S. 2,446,522—Winthrop-Stearns—Diaryl Nitrogenous Heterocyclic Alkylene Compounds.

U. S. 2,446,538—Glidden—3-Amino Steroids.

U. S. 2,446,574—Winthrop-Stearns—Penicillin Purification.

U. S. 2,446,651—W. H. Hartung—Alpha-Amino Beta-Hydroxy Aliphatic Carboxylic Acids.

U. S. 2,446,722 — H. Rust—Hair Curler.

U. S. 2,446,792, 2,446,796, and *2,446,793*—Wm. S. Merrell Co.—Substituted Pyridinium and Piperidinium Compounds.

U. S. 2,446,803 and *2,446,803*—Hoffmann-La Roche—Heterocyclic Bases.

U. S. 2,446,916—U. S. Vitamin—Therapeutic Composition. Contains hexhydric alcohol hexanitrate, a desensitizing agent therefor, a xanthine derivative having diuretic properties and nicotinic acid or its salts.

U. S. 2,446,957—du Pont de Nemours—Nicotinamide Process. Involves heating 3-cyano-pyridine in the presence of water and an organic amine.

U. S. 2,446,962—K. B. Spring—Head Support for Hair Driers.

U. S. 2,446,974—E. R. Squibb—Penicillin - Protein Reaction Product.

U. S. 2,446,981—Vick Chemical—Aluminum Hydroxide Antacid Composition.

U. S. 2,447,099—Hoffmann - La Roche - 2 - (p-acetoxyphenyl) - 3-ethyl-6-methoxy indene.

U. S. 2,447,175 2,447,176 and 2,447,177—J. R. Geigy A. G.—Triazines, such as lauroguanamine, palmitoguanamine and stearoguanamine. Intermediates for medicinals and dyestuffs.

U. S. 2,447,194, 2,447,195 and 2,447,196—J. R. Geigy A. G. — Tetrohydropyranes. Analeptics.

U. S. 2,447,325—Research Corporation—Production of 3,11-Oxygenated Steroids.

U. S. 2,447,361—Merck & Co., Inc.—dl-N-cyclohexylacetylserine Hexahydrobenzyl Amide.

U. S. 2,447,363—H. M. Rabinowitz—Compound of Urobilinogen and Hipuric Acid. Antipressor.

U. S. 2,447,395—Parke, Davis & Company—Morpholine Substituted Esters.

U. S. 2,447,396—M. Coplans—Stable Medicinal Salts of Acetylsalicyclic Acid.

U. S. 2,447,419—Eli Lilly and Co.—Preparation of Diphenylacetonitrile.

U. S. 2,447,523—Merck & Co., Inc.—Catalytic Hydrogenation of 2, 4-Diamino - 5 - Nitroso - 6 - Hydroxy Pyrimidine.

U. S. 2,447,544 and 2,447,545—Merck & Co., Inc.—Synthesis of Tryptophane.

U. S. 2,447,626— C. T. Bahner—Nitro-beta-ketones.

U. S. 2,447,702—H. Lundbeck & Co.—Process for Making Benzolsulfonamido - 1, 3, 4 - Thiodiazole Compounds.

U. S. 2,447,814—J. E. Seagram & Sons—Vitamins from Stillage. Involves inoculation with Aerobacter bacteria capable of synthesizing components of vitamin B complex.

U. S. 2,448,033—R. E. Kruck—Lip Rouge Dispenser applicator.

U. S. 2,448,047—B. T. Bush, Inc.—Preparation of Unsaturated Alcohols.

U. S. 2,448,180—Abbott Labs.—Medicinal Composition for post-extraction cavities. Contains gum and liquid humectant of polyhydroxy type.

U. S. 2,448,185—E. Levin—Vitamin Extraction from Sunflower Seed.

U. S. 2,448,408 — National Drug Company—Para-(N-dialkyl Pyrryl) benzoates. Local anesthetics.

U. S. 2,448,722—National Drug Co. — 5-Benzimidazol Derivatives of Barbituric Acid.

U. S. 2,449,003—American Cyanamid — Water - soluble Esters of Riboflavin.

U. S. 2,449,041—American Cyanamid—Riboflavin Solutions.

U. S. 2,449,070—E. Hauser and P. Kovol—Protective Coating for Use in Manicuring.

U. S. 2,449,076—Attorney General of U. S.—Process of Extracting Antidiabetic Substance from Pancreas.

U. S. 2,449,080 and 2,449,081—Dr. Salsbury's Labs.—Composition for Control of Poultry Coccidiosis. Contains phenyl - arsonic acid, p-hydroxy phenylarsonic acid and water soluble salts.

U. S. 2,449,140 and 2,449,144 to Western Condensing Company—Improving Yield of Riboflavin in Fermentation Processes.

U. S. 2,449,165—Air Reduction Co.—Airborne Anesthetizing Apparatus.

U. S. 2,449,205—O. D'Emilio—Hair Drier.

U. S. 2,449,241—Ciba Pharmaceutical Products Inc. — 2 - (N-aryl-N-aralkyl-aminoalkyl)-imidazolines.

U. S. 2,449,301—F. Interrante—Ringlet Hair Curler.

U. S. 2,449,340—U. S. A.—Vitamin B Complex Concentrate.

U. S. 2,449,440 — Hoffmann - La Roche—Aryl Esters of Tertiary Carbamic Acid.

U. S. 2,449,638—Wyeth Incorporated—Substituted Glycinamides.

U. S. 2,449,640—Wyeth Incorporated—Riboflavin Solutions.

U. S. 2,449,724—W. F. Short and M. W. Partridge—Manufacture of Amidines.

U. S. 2,448,996 and *2,448,998* to—S. M. McElvain and T. P. Carney—Potent Anesthetics: 3-(2′-methyl piperidino)-propyl-p-n-butoxy benzoate; piperidine propanol esters of phenylacetic acid; and 3-(2′, 6′-dimethylpiperidino)-propyl salicylate.

U. S. 2,449,039—American Cyanamid Company—Penicillin particles are coated with shellac or an alkyd resin and suspended in a water-insoluble, assimilable glyceride. When placed in gelatin capsules leakage and unsightly oil layer were avoided.

(*To be continued*)

Perfumer's Shelf

Lavender Oil in Oregon

Results of experimental work in the production of lavender oil in Oregon were reported by C. S. Pease at the 114th meeting of the American Chemical Society. The purpose of this work was to investigate the possibilities of producing lavender oil in Oregon, which would have desirable qualities and could be produced in good yield. Experimental plots were provided from former nursery stock which matured *Lavandula Vera* planted in 1930, and was five years old. The oil content of the flowers was obtained by steam distillation and the product was stored in dark bottles in a cool, dark room. After extraction and partial vacuum distillation, the physical constants of the oil were measured, and the chief chemical components separated by fractional vacuum distillations. These components were identified through derivative formations and their physical constants. The oil samples from year to year show a large per cent of linalool, some linalyl acetate, geraniol, ethyl amylketone, and l-limonene. The average harvest over a 7-year period for approximately ¼ acre showed an annual production of 18 to 20 pounds of oil per acre.

Tests have shown that the oil produced in Oregon has properties and composition making its quality closely comparable with the oil of Lavandula Vera produced in England, which has always ranked highest in market value for perfumes, cosmetics, and soap manufacturing.

Formic Acid Esters

Formic acid esters have ethereal or floral and fruity odors. As explained by T. Ruemele (*Manuf. Chem. & Manuf. Perf.* 19:315, 1948), they do not in themselves constitute bases for perfumes and flavors. Rather, they are essentially modifiers which enrich, freshen and round off the character of a composition. They must be used, however, with skill and with restraint. A brief description of the action and uses of the important formic acid esters is given by Puemele. He considers first the formic acid esters of aliphatic alcohols, as follows:

Methyl formate has both the lowest molecular weight and boiling point of all of these esters. There is still little use for it in perfumery in spite of its pleasantly ethereal odor which is fruity, rounded off.

Ethyl formate also has a strong ethereal odor but again it is not very significant in perfumery. It is used chiefly for synthetic fruit essences.

Amyl and isoamyl formate have nutty flavors and their odor is reminiscent of plums and peaches. Apart from their obvious uses in synthetic flavors, they can be used in cosmetics, particularly lipsticks in order to impart a pleasant flavor.

Hexyl formate is one of the higher series of formates which have more pronounced olfactory effects. It has both an arrack and a fruity fragrance and its use in perfumery is to emphasize the fruity note in a composition.

Heptyl formate similarly freshens a perfume. This ester develops a bloomy odor which becomes more pronounced on dilution.

Octyl formate faintly suggests roses in its fruity note. This character is increased when the corresponding acetate is used with this ester.

Nonyl formate contributes a leafy note to perfumes.

Decyl formate is used to clear a mixture of the other formates and thus distinctly improves the effect.

Propyl, isopropyl, butyl and isobutyl formate each have a fruity odor, but they are relatively unimportant and are little used.

The formic acid esters of the terpene group are also considered:

Linalyl formate has a rough and lavender-like odor and is used extensively to finish off colognes.

Geranyl formate has the geraniol odor truly suggesting the note of roses. Because it is unstable it should not be used in strong concentrations. Combined with geranyl acetate it enhances the odor of rose and nerol type perfumes, particularly those used in toilet lotions or for scenting creams.

Nerol formate is similar to geranyl formate, but it has a less powerful odor. Both esters should be used where bloomy compositions require freshening. Because of its well-developed odor, however, geranyl formate may be preferred.

Citronellyl formate has a fine and fresh odor reminiscent of white roses, provided it is absolutely pure.

Bornyl formate retains the smell of the camphor used in its preparation. Combined with its acetate, this ester produces a strong fir-like odor.

Terpinyl formate, like geranyl formate, is unstable. Terpineol, with its odor of lilac and lily-of-the-valley, changes to terpine when water is added. Pure terpinyl formate has a bergamot-like odor, an example of the complete change of odor achieved by esterification.

Menthyl formate has a pleasant and fresh odor of peppermint oil.

Argentinian Essential Oils

Further information on essences from Argentine plants has been presented by G. A. Fester, M. A. Gargallo and E. A. Martinuzzi (*Anales soc. cient argentina* 144:457, 1947). These newer data include the identification of citral as a naphthocinchonic acid condensation product in the extract from *Tagetes filifolia*. From a sample whose citral had resinified they isolated a minor proportion of an optically inactive terpene aldehyde. These workers also found that the essence of *Bystropogon mollis* contained a fraction of a mixture of terpenes and a major fraction of *l*-menthone, pulegone, and *d*-isomenthone. Another sample was found to contain menthol and two unidentified acids, one monobasic and the other dibasic. It was also reported that the essence of *Lippia turbinata* contains *d*-limonene, phenols, ketones, aldehydes and sesquiterpenes.

Sylhet Orange Oil

Results of the chemical examination of the essential oils from the peels of Sylhet oranges have been reported. S. S. Nigam and S. Dutt (*Indian Soap J.* 11:71, through *Chem. Abstr.* 42:5171, 1948). In their study the

hand pressed oil was freed from extraneous matter by filtration and dried by treatment with anhydrous magnesium sulfate. The clear, limpid yellow oil had the following characteristics:

Specific gravity	**0.8413**
Index of refraction	**1.4730**
Specific rotation (in chloroform)	**13.3°**
Acid value	**0**
Saponification value	**5.7**
Saponification value after acetylation	**12.8**

The oil had the following composition: *d*-limonene 94.14 per cent; terpinene—a trace; methyl anthranilate 0.2 per cent, crystalline wax 0.56 per cent; noncrystalline waxy matter 2.0 per cent, and unidentified substances, including esters, 3.1 per cent.

Galgal Oil

The tree (*Citrus limonia*, var. acida) known in India as galgal produces fruit which has unusual medicinal properties. Since the essential oil of the fruit is suspected of being partly responsible for its medicinal value, S. S. Nigam and S. Dutt (*Indian Soap J.* 11:225, through *Chem. Abstr.* 42:4717, 1948) isolated the oil and made the first examination of it. Steam distillation produced a clear, pale-yellow liquid with a refreshing odor. The yield was 0.9 per cent based on the fresh fruit. Galgal oil was found to have the following physical properties:

Specific gravity	**0.8498**
Index of refraction	**1.4755**
Specific rotation	**107.4°**
Acid value	**0**
Saponification value	**13.68**
Saponification value after acetylation	**17.12**

It was found that galgal oil contains: *d*-limonene 92.24 per cent, citral 3.6 per cent, alpha-terpineol 0.64 per cent, wax 0.37 per cent, valeric ester of a sesquiterpene alcohol (as $C_{15}H_{24}O$) 0.98 per cent, and unidentified substances 2.17 per cent.

Italian Patents on Essential Oils

Recently granted Italian patents provide interesting data on improved methods for essential oil production or utilization. For example, A. Calandra's patent (416,569) describes a method for extracting essential oil from citrus fruit. In this procedure, peels are soaked in a 50 per cent sodium chloride solution for two hours or in a weakly alkaline solution for a few minutes. They are allowed to drain for twelve hours and are steam-distilled under specific and detailed temperature and pressure conditions.

Italian patent 417,865, granted to G. Borruso, describes methods for making aqueous solutions of essential oils. For instance, the following mixture may be stored and used by diluting it in water:

Citric acid	**2.000 parts**
Water	**3.000 "**
Essential oil	**0.500 part**
Salicylic acid	**0.625 "**

Coumarins from Leaves of Citrus acida

In a report on the natural coumarins isolated from the leaves of *Citrus acida*, H. Khastagir (*J. Indian Chem. Soc.* 24:421, 1947) states that the following compounds were obtained: isopimpinellin, bergaptene, and citropten. In this work, isolation consisted of extracting the air-dried leaves with ether and purifying the crude compounds by repeated sublimations or crystallizations from methanol.

Spanish Aniseed

Aniseed, often called matalahuga in Spain, is botanically known as *Pimpinella anisum* L., belonging to the Umbelliferae. It has flourished in Spain from earliest times, especially in the south, but is fairly widely distributed in that country, although the seed is said to be somewhat smaller than that grown in Russia and Germany. The seed contains 2.2 to 3.2 per cent of the essential oil. Some account of its production and yields in Spain is given by M. d'Argila in *El Monitor de la Farmacia* (54:125, 1948). He first deals briefly with various adulterations of the seed and modes of detection; and the different kinds of cultivation adopted in the principal growing districts: in Mancha, Andalusia, Jaen, Granada, Malaga. Owing to the high price of the seed and oil in recent years its cultivation under the best conditions has been somewhat stimulated.

The essence content of the seeds, as well as the anethole content, varies rather widely. Three methods of obtaining anethole are briefly noted: (*a*) fractional distillation under vacuum of 17 mm., giving a yield of 98-99 per cent, which may be still further increased by a second distillation, followed by washing with sodium hydroxide to improve appearance and odor; (*b*) centrifuging, possibly the best method, together with cooling below 17°C., and using high speed, with or without a second centrifuging, yields being 98-99 per cent; (c) crystallizing in petroleum ether, as practised in U.S.A., Germany, and England, but not in Spain owing to difficulty in getting the required solvent. It is suggested that some form of combining distillation or centrifuging with ether extraction would give best results. In the opinion of d'Argila there is no real difference between the Indian (badiana) anethole or the Spanish (matalahuga), although the Spanish liqueur or essence manufacturers appear to be prejudiced in favor of the former. What actually happens is that the aniseed oil or anethole may be mixed with varying proportions of other aromatics: orange, coriander, cardamom, cinnamon, fennel, etc., in order to mask a too strong odor or favor of anethole. These aniseed oil blends or bouquets may be further modified by addition of alcohol, water, sugar.

The various commercial preparations of aniseed oil may be grouped as: dry, semi-sweet, sweet, superfine, creams, and the so-called Pernod. Among the first is the well-known Cazalla, from the district of that name, containing 35-40° alcohol. Various methods of preparation are indicated. One is to distil a mixture of aniseed, water and alcohol, the intermediate fraction being the one desired (Cazalla). d'Argila says that this requires some experience, especially with the preparation of blends with other essences mentioned above (cinnamon, etc.). Among these is the so-called Spanish Paloma or milky emulsion of aniseed with water, as made, for example, in Andalusia. Some minor variations in the production of these mixtures, etc., are indicated. The semi-sweet type contains up to 10 per cent sugar, with variations according to district both in sugar content and in other respects, such as the relative proportions of pure anethole and matalahuga. Some of these and the sweeter kind may contain honey, glycerine, saccharin, etc., and are best prepared in the cold. The aniseed syrups may be made by mixing solutions of sugar in water with those of aniseed oil in alcohol (90°), varying proportions according to the type of product required.

Several fine grade aniseed *bouquets* may be prepared from different recipes, of which the following is a sample: anethole 400, fennel 1, coriander 10, vanilla 0.02, orange 10, cinnamon 0.5, pimento 0.2, tincture of iris 20, in about double the total weight of alcohol.

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Abreast of the Markets

Production of Synthetic Alcohol Presages Change in Entire Setup. Prices Soft as Demand Lags; Stocks Up.

It was reported in some quarters that the market situation was somewhat improved from a demand point of view, while other quarters expressed the feeling that there was little or no significant improvement over the level of business in recent months. There was still a sufficiently weak tone to the market that some producers were inclined to continue the practice of shading prices in certain instances below the level of official quotations.

August production of ethyl alcohol at industrial alcohol plants amounted to 25,790,144 proof gallons. The principal raw materials used were: Total grains—18,443,566 pounds; molasses—10,875,685 gallons and ethyl sulfate—10,971,470 gallons. Stocks at the end of August were 36,097,564 proof gallons.

Ethyl alcohol is one of the few basic organic chemicals now in free supply. The market situation at present is acutely competitive as a result of slow movement of material in recent months, according to a report by the U. S. Department of Commerce.

Present prices for ethyl alcohol and denatured grades, which have been cut under pressure of competition, are lower than the slightly lower raw material costs would indicate.

The price effect of new synthetic alcohol supplies, the first to enter the commercial market, is as yet undetermined.

Domestic production of ethyl alcohol which was greatly expanded for war needs is now back close to the prewar rate. Output in fiscal 1947 was 249 million proof gallons and in 1948—332 milling proof gallons as compared with 201 million in 1939 and 299 million in 1941.

The two principal sources of ethyl alcohol—(1) fermentation of either molasses or grain and (2) synthesis from ethylene, a petroleum product—today are resuming their race for volume production which was interrupted during the war period. In 1939 and 1941 the fermentation of grain and molasses accounted for roughly 75 per cent of the alcohol production with molasses as the major raw material. In 1947 and 1948 fermentation accounted for nearer 25 to 30 per cent. On the other hand production from the petroleum source, has increased from 25 per cent in the earlier years to approximately 45 per cent today. This figure will be increased by another 5 to 6 per cent as a result of new production facilities which began operation in October. In 1947 and 1948 potatoes, sulfite liquors, unfinished spirits and other redistillation products accounted for the balance of production.

During the prewar period molasses was a much cheaper material for the manufacture of industrial alcohol than grain. About 2½ gallons of blackstrap molasses are required to produce 1 gallon of alcohol of 190 proof. A bushel of grain yields about 2½ gallons of alcohol. In the 10 year period 1931-40 the price of 2½ gallons of molasses averaged 16½c while the average price of corn was 61c a bushel. Dividing this average price by 2½ the cost of corn per gallon of alcohol averaged 24½c or about one half as much again as the corresponding figure from molasses.

Today with molasses selling at 24c per gallon and corn at $1.61 per bushel the raw material costs are 60c for molasses and 64c for corn per gallon of alcohol produced. Conversion costs for the two materials are about equal. While exact cost figures for synthetic alcohol production are not known it has been indicated that raw material costs occupy a less important position in the over-all production cost and that conversion costs per unit have been cut as production increased.

From the costs outlined above it would seem that in the face of sustained high agriculture prices the fermentation process for ethyl alcohol would be placed at a decided disadvantage price-wise in relation to increased synthetic alcohol production. Another source of synthetic ethyl alcohol planned for the future is as a byproduct chemical of the Fischer-Tropsch process for hydrocarbon synthesis from natural gas.

Imports of ethyl alcohol during the first 6 months of 1948 were two thirds those of the corresponding period in the previous year despite offerings of tank quantities. Stocks of ethyl alcohol have increased monthly in 1948 to the point where July stocks were nearly double those of January 1948 and exceeded monthly production by an increasing margin.

A comparison of the end use pattern for ethyl alcohol in the fiscal years 1940 and 1947, both nonwar years, shows very little change except for one or two uses. In both years the largest single use was in manufacture of other chemicals. Its use as a solvent has declined with the consuming industries' trend toward cheaper solvents such as methanol and isopropyl alcohol. Demand for ethyl alcohol as an antifreeze material has declined and is expected to be less this season because of increased supplies of low cost methanol and of the permanent types—ethylene glycol and glycerin.

The loss of the ethyl alcohol market, in some measure then, can be attributed to lower priced substitute materials, which for the most part are of nonagricultural origin, according to this report.

• Prices quoted in this section were current on the first of this month,

Cod Liver Oil Tight

Imports of Cod liver oil into the United States during the first half of 1948 increased by more than 27 per cent over the total for the like period of the preceding year. Such imports in the 1948 months under review amounted to 8,350,488 pounds, compared with 6,535,013 pounds in the first 6 months of 1947.

It was estimated that world production of this item is now about equal to that of 1938, but it is considerably short of demand because of public appreciation of the value of the oil in both human and veterinary uses resulting in a substantially broadened demand. Some quarters expressed the feeling that in so much as codliver oil

(*Continued on page 675*)

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Sales and Exports of Citronella and Lemongrass Oils Under Control in Guatemala. Vanilla Beans Unsettled.

The establishment in Guatemala of an Office for Control of Sales and Exports of Essential Oils (citronella and lemongrass) was authorized by an Executive Resolution of May 11, 1948, published May 13, and effective 2 days later. The resolution provides that the controlling Office shall be composed of five principal oil producers chosen solely by the essential-oil producers. Furthermore, it provides that the Guatemalan customhouses shall permit the exportation of citronella and lemongrass oils only when shipped by the above-mentioned Office, and export documents covering the shipment of these oils shall be valid only when they are issued by the controlling Office.

A later resolution of the Ministry of Economy and Labor (May 27, 1948) established the Regulatory Law for the Office, and provided that the controlling Office shall be administered by a President and a Board of Directors composed of six members. The Office is charged with the control of the offers, sales, exports, and storage of citronella and lemongrass oils, and is to act in an intermediary capacity with the banks and as depositary for each producer of essential oils. The Office is likewise authorized to establish warehouses in which to store the oils and, as soon as possible, to install a laboratory in which the oils delivered to it will be analyzed. The President, with the Board of Directors, is authorized to establish the price of oils for sale and exportation.

For purposes of delivery of essential oils to the Office's warehouses two periods are assigned, namely from the 1st to the 15th, and from the 16th to the end of each month. No producer is permitted to deliver more than 60 barrels of 400 net pounds each during a period; neither is he permitted to send less than 1 barrel during a period.

The resolution provides that a general meeting of the Board of Producers be held each semester to hear and vote upon the report of the Board of Directors on the activities of the Office during the preceding 6 month period. Members of the General Board of Producers must be owners of land which is cultivated in citronella or lemongrass, and be subject to the provisions set forth in the Regulatory Law as well as to the resolutions of the Board of Directors and of the General Board (of Producers).

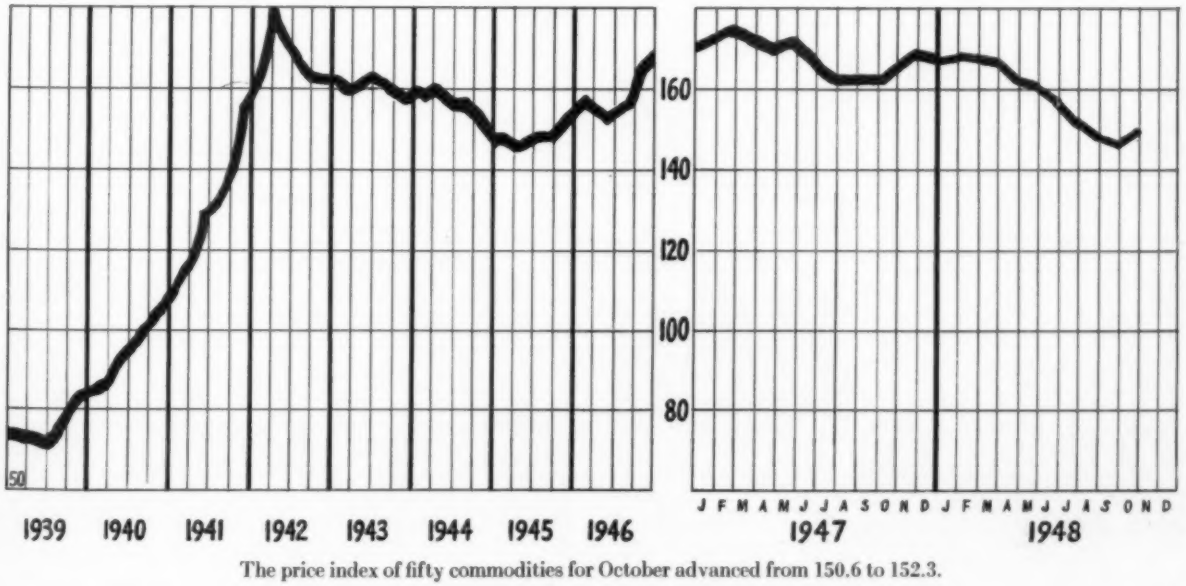
Each producer is obligated to deliver to the Control Office in its own warehouses his total production of essential oils of citronella and/or lemongrass. These oils must contain 85 percent of total geraniol (including 35 percent of citronellal) for citronella; and 75 percent of citral for lemongrass. Producers must notify the Office of the areas of citronella and lemongrass cultivated by them, and of any changes which may be made in the planted areas. Each producer must contribute toward the maintenance of the Office the amount of 4 centavos ($0.04) on each pound of oil delivered. This tax may be increased or decreased by the General Board. Producers are required to accept the decisions of the Board of Directors in the matter of the price of the oils and of the shipment of same under the provisions of the Regulatory Law.

The former resolution provides that sales contracts made prior to the above-mentioned resolutions shall remain valid until their termination date. The latter resolution provides that the only sales of oils which shall be excluded from the tax of 4 cents a pound, established for support of the Office, are those which may have been delivered to the railway before May 15, the date on which the Resolution of May 11 became effective. The interested proprietors must justify this situation with the respective waybill. The tax in this case must be covered by the interested party when each shipment authorization is issued by the Office. The contracts to which this article refers must be proved and registered in the Office for Control and Sales and Exports of Essential Oils.

The Office, located at 4a Avenida Sur No. 1, Guatemala City, began operating on May 21, and shortly thereafter announced the first price of $1.55 a pound for citronella oil c. and f, N. Y. The price of lemongrass was not announced, but was expected to be the same or only slightly less

(*Continued on page 675*)

50 Raw Materials—Weighted Price Index. 1926 = 100.



The price index of fifty commodities for October advanced from 150.6 to 152.3.

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OCTOBER PRICE CHANGES

UP

Balsam Peru 10c
Echinacea root 5c
Manna small 20c
Menthol Nat. 20c
Rhubarb root HD 20c

DOWN

Aconite root 10c
Angostura bark 5c
Balsam Copaiba SA 5c
Belladonna leaves 5c
Bergamot oil 15c
Birch oil Southern 55c
Burdock root 2c
Cassia oil Redist 10c
Cedar leaf oil 5c
Citronella oil Java 20c
Citronellol 25c
Dill oil $1
Elm bark 10c
Golden seal root 55c
Helonias root 10c
Hemlock oil 25c
Henbane leaves 25c
Jalap root 2c
Lemon oil Calif. 5c
Lemon grass oil 5c
Malva flowers blue 25c
Orange oil American 15c
Papain pure powd. 55c
Patchouli oil $1.50
Pennyroyal oil 20c
Peppermint oil, Nat. 30c
Pine needle oil 25c
Rosemary oil 15c
Sage oil Spanish 20c
Sassafras oil Art. 8c
Senega root 5c
Senna Tinnevelly 2c
Spearmint oil 50c
Spruce oil 25c
Stearic Acid TP 1½c
Thyme Oil Red 45c
White 45c
Vetivert oil Java $2.50
Wahoo bark of root 10c
Wormseed oil 50c
Zinc stearate 3c

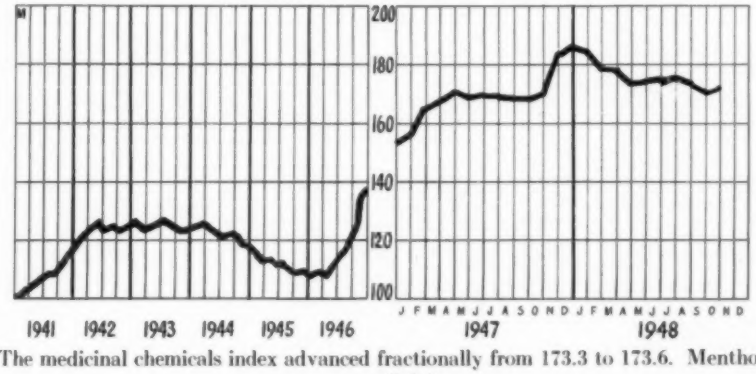
Cod Liver Oil Tight

(*Continued from page 671*)

is a by-product of food fishing operations and the demand for food fish of the arctic and subarctic types will remain heavy in view of the world need for food, that the supply situation should remain fairly stable with respect to future outlook.

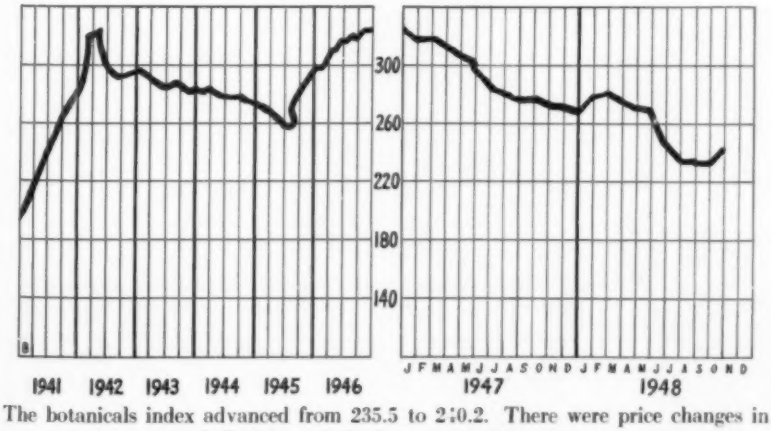
British cod liver oil producers stated that their output has returned to pre-war levels and will probably increase so long as the market for fish holds. German producers are expected to resume operations, but are not expected to meet local demands for a long time. Norway's production in 1948 was only about half of the high level of 10,000 tons the preceding season. Canada's dollar shortage and the heavy demand in North America for codliver oil tends to limit any exports of oil from Canada, according to British estimates of the situation.

15 Medicinal Chemicals—Weighted Price Index. 1926 = 100.



The medicinal chemicals index advanced fractionally from 173.3 to 173.6. Menthol was up slightly.

15 Botanicals—Weighted Price Index. 1926=100.



The botanicals index advanced from 235.5 to 240.2. There were price changes in belladonna, rhubarb, senna, and ipecac.

Citronella and Lemongrass Oils Sales and Exports Controlled

(*Continued from page 673*)

than that for citronella. Prior to May 21, current individual quotations had ranged from as low as $0.95 to as high ast $1.10 a pound. The organizers of the new association gave as their reasons for endeavoring to control the price of essential oils the fact that the current quotations of about $1 per pound for citronella oil were unprofitable, and any further reduction would result in paralyzation and disappearance of the industry in Guatemala. They claim that their only aim is to protect prices of essential oils produced in Guatemala, thus enabling the continued growth and expansion of the industry, and they declared that if at any time costs should be reduced, a corresponding reduction in the official price would be made. After June 15 the price of citronella was reduced to $1.05 a pound.

Vanillin Down

A drop in the price of the exeugenol vanillin was noted in the New York market. This material came down from $4.50 a pound to $4. Because of its higher price, this product was not selling so well as the lignin and the exguaicol. The new range of prices is as follows: 25 lb. packages or over $4 a pound. Five pound packages $4.05 per pound. One pound packages $4.15 per pound.

Stearates Lower

During the latter part of October manufacturers reduced by 3c per pound the price of the following stearates: Aluminum stearate technical D to 39c. Aluminum stearate technical M. to 39c. Zinc stearate USP XIII to 43c. Calcium stearate technical bulky grade A to 41c, impalpably powdered grade A to 43c, and magnesium stearate purified impalpably powder to 44c.

Output of Camphor Products, Japan

Average monthly production of camphor products in Japan during 1947 was approximately double the monthly average in 1946. Average monthly output of these commodities in 1947 was as follows, with 1946 data in parentheses (in metric tons): Crude camphor, 85 (42); camphor oil, 102 (50); and refined camphor, 31 (19).

In view of the competition which has developed recently between natural vegetable waxes and their synthetic replacements, one might conclude from declining imports of these products that the substitutes are making progress.

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partly true. Carnauba wax importations in 1947 fell to the lowest point in 13 years (11,836,000 pounds) but this year staged a recovery (7,981,000 pounds in the first six months) despite price fixing in the country of origin and a tendency among consumers here to buy more carefully. Imports during January-June were 14 per cent greater than those for the first half of last year.

The Brazilian government some time ago established a price floor under carnauba, and it is not possible for an importer or manufacturer here to buy the wax at less than the equivalent of 79c per pound in Brazil for the No. 3 North Country grade. To land this in New York will cost an additional 4c per pound.

There are substitute products on the market for the imported wax, but many of these contain varying percentages of carnauba. Buyers of the "oxidized" waxes obtained from heavy petroleum oils also find it necessary to combine these with the natural product. A completely satisfactory replacement for carnauba probably will emerge some day as a triumph in synthetic organic chemical research.

Glycerin Firm

Suppliers of glycerin felt a sense of trading security during the period under review by virtue of indications that the price structure would likely hold for another month or so before a price break would develop. The production of synthetic glycerin, which is a new large scale chemical operation, was still experiencing the usual production and operating problems which are inevitable in such an undertaking, and which has prevented the new plant from reaching large scale production. However, it is expected in many quarters that when the full capacity of the plant is in operation for a while, the output will be sufficient to ease the glycerin market to a point where there will be a break in prices. Just when that will occur is a matter of conjecture, but that it will not be in the immediate future seems fairly certain.

Mint Oil Production

Current releases from the Bureau of Agricultural Economics, U. S. Department of Agriculture show the indicated 1948 production of mint oils to be 2,130,000 pounds. Peppermint oil production in the 6 States; Indiana, Michigan, Ohio, California, Oregon, and Washington is expected to total 1,427,000 pounds while spearmint oil output in Indiana, Michigan, and California, it is estimated, will reach 703,000 pounds in 1948. The summer harvest in Indiana and Michigan is well along and was expected to be largely completed by early September. However, some distilling of second clippings continued throughout the month.

Sandalwood-Oil Production, Mysore, India

Production of sandalwood oil in Mysore, India, in 1947 amounted to 43,500 pounds, the output from 488 tons of wood, states the foreign press. The Indian demand for this oil has slackened considerably because of the decline in soap production owing to an acute shortage of caustic soda. The volume of foreign business has been affected by the imposition of import duties throughout the world; also, the perfume market reflects the increasing pressure of inferior oils and the use of a synthetic sandalwood in the United States.

Vanilla Beans: Export Tax Increased; Prices Reduced

Effective September 4, 1948, the Madagascar export tax on vanilla beans was increased from 21 to 40 per cent ad valorem by an order of August 28, published in the Journal Officiel of Madagascar on September 4, following the approval of the French Government on August 21.

On the same date, new minimum prices were established for Bourbon vanilla exported from Madagascar to any destination other than France, by an order of August 30, published on September 4, according to a report of September 10 from the United States Consulate, Tananarive, Madagascar.

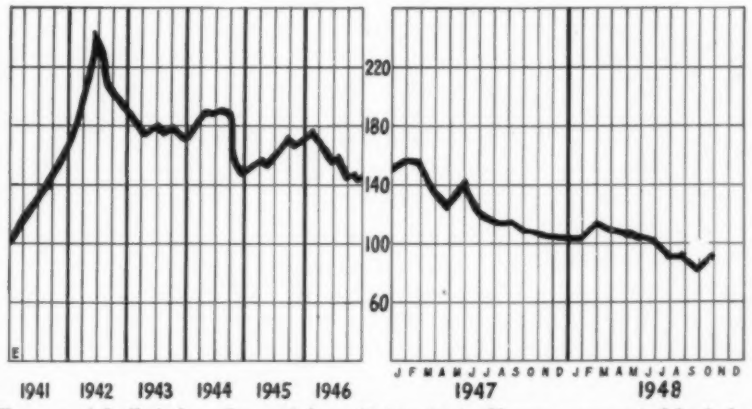
The new minimum prices for Madagascar and Comora Island beans are (per kilogram f. o. b.):

Quality	Madagascar beans	Comoro Island beans
	U. S. Dollars	*U. S. Dollars*
50 percent firsts	11.00	10.00
25 percent firsts	10.00	9.50
Seconds down	9.50	9.00
Thirds down	9.00	9.00
Fourths down and cuts	7.50	7.50

Agar Production and Exports Japan

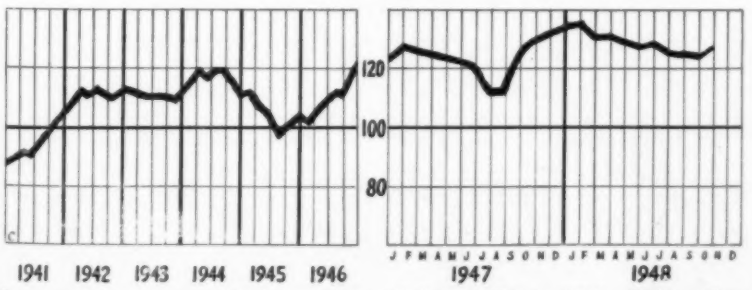
During the 1947-48 processing season, 1,330,033 pounds of agar were produced in Japan, according to the foreign press. About 1,000,000 pounds are to be offered for export. The comparable figures for the 1946-47 season were 1,000,000 pounds for production and 750,000 pounds for export (contracted during the period under review).

15 Essential Oils—Weighted Price Index. 1926 = 100.



The essential oils index advanced from 88.7 to 94.6. Changes were noted in Anise, Bergamot, Cassia, Citronella, and Peppermint.

25 Cosmetic Raw Materials—Unweighted Price Index. 1926 = 100.



The cosmetic raw materials index advanced from 120.1 to 132.9. Balsam Peru, Menthol, and Stearic Acid accounted for the higher index figure.

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Industry's Books

Increasing Wholesale Drug Salesmen's Effectiveness, by James H. Davis, Ph.D., Department of Business Organization, The Ohio State University, 193 pp., The Bureau of Business Research, Ohio State University, Columbus.

This study was undertaken jointly by the Department of Business Organization and the Bureau of Business Research of the Ohio State University in cooperation with the Committee on Sales Management of the National Wholesale Druggists' Association. The study is the result of a fellowship granted to the Ohio State University by the National Wholesale Druggists' Association, which was awarded to Mr. James H. Davis. In presenting the results of the study, every effort has been made to make suggestions that will be of practical value in improving the selling performance of salesmen. Contents: Sources, Purposes and Methods. The Wholesale Drug Salesman's Job. Conditions of Work. Background of Present Sales Force. The Time Study. The Duty Study. Selling Difficulties. The Job Specification. Application of the Data. Other Aspects of the Wholesaler-Retailer Relationship. Summary and Conclusions.

The Mill on Mad River, by Howard Clark, 278 pp., Little, Brown And Company, Boston, $2.75.

Although a review of a popular novel would not customarily appear in this department, this book, which ranked among the ten best sellers in September, is of lively interest to the trade since it presents the story of an industrial infant which is now, 146 years later, the Scovill Manufacturing Company. While the information contained in the book is authentic, it has been woven into a love story in such a way as to make it interesting, rather than dry statistics. Through the lively experiences of Waterbury's young Anson Holt, you will view the early development of the brass industry in America. His adventures in England where he succeeded in purchasing brass making equipment and also hired skilled brass makers, is very interesting and exciting reading. His arrival back home with his trade "know how" is tragic indeed. The factory which was awaiting the new equipment was burned to the ground by an incendiary determined to prevent the establishment of the brass goods business in America. After the fire, however, the old Button Shop was constructed on Waterbury's Mad River by Leavenworth, Hayden & Scovill. The Button Shop was started as Abel Porter & Company in 1802 and it is from this humble beginning that the Scovill Manufacturing Company traces its history.

Pharmacology, by J. H. Gaddum, Sc.D., F.R.S., M.R.C.S., L.R.C.P., Professor of Pharmacology in the University of Edinburgh, 3rd Ed., 504 pp., Oxford University Press, New York, $8.

The subject of this work is developing rapidly and many changes have been made in this edition, which is supposed to be up to date at the beginning of 1947. Some of the main additions and alterations deal with folic acid, the actions of drugs on endocrine glands, drugs acting against acetylcholine adrenaline and histamine, ergot, anticoagulants, diuretics, plasma proteins, BAL, insecticides, detergents, malaria, sulphonamides, streptomycin, and penicillin. Medical men are constantly being asked by manufacturers and others to try the effect of new drugs on patients, and it is therefore important that they should know something of the kind of evidence that justifies the trial of new drugs. This book endeavors to give them this knowledge.

Remington's Practice of Pharmacy, by E. Fullerton Cook, P.D., Ph.M., M.Sc., Chairman of the Committee of Revision of the Pharmacopoeia of the United States of America, and Eric W. Martin, Ph.C., B.Sc., with the collaboration of more than forty associate editors, Ninth Ed., 1511 pages, 800 Illus., Mack Printing Co., Easton, Pa., $16.

This is a treatise on the making, standardizing, and dispensing of official, unofficial, and extemporaneous pharmaceutical preparations, with descriptions of medicinal substances, their properties, uses, and doses. The new edition now available has been thoroughly revised and rewritten. It contains the latest information on every aspect of the profession, and appears in a completely new format. Here is the latest word in useful reference works. Every phase of scientific and professional pharmacy is considered in the new Remington. Numerous cross references and a complete index (approximately 50,000 entries) make the answers to every pharmaceutical problem instantly available to the busy pharmacist. No other pharmaceutical text has ever provided so much factual information in such a concise logical arrangement. The "Remington" has long supplied the basic knowledge of pharmacy to pharmaceutical manufacturers. It contains processes, formulas and a wealth of other data on manufacturing never before assembled in one volume. The physical laws controlling drug extraction and solution, the meaning of hydrogen-ion concentration (pH), isotonicity, colloidal state of matter, the latest processes for preparing tablets and parenteral solutions, and other innumerable principles and practices underlying the successful manufacture of medicinal products are presented in this practical and lucid text. For the control laboratory, official tests and assays are reviewed and explained. The pharmaceutical significance of this information, which is not generally available in the usual chemical text, is presented. The new "Remington" is a large book 8-1/8 by 11-¼ in., and is a must for every library in the industry.

Home Book of Money-Saving Formulas, by Paul Doring, 440 pp., Barnes & Noble, Inc., Paper cover, $1.

The formulas presented in this book have been selected with a twofold purpose: to give the reader the information necessary for preparing useful products for his home, office, or small business; and to acquaint him with some of the manufacturing processes and formulas used by large and small industries. Part One is devoted to simple formulas that are especially suitable for home use. They cover a wide range of household needs and interests, and many of them will be helpful for business use as well. In this section are the formulas for cosmetic preparations and a very limited number of drug formulas for such products as liniments, dental preparations, etc. Part Two is devoted to commercial formulas and processes including miscellaneous commercial formulas, metallurgy, and textiles.

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Expanding Role of Vitamin K

(Continued from page 609)

factor. An antopsy study[68] further indicates that there is a close relationship between hypoprothrombinemia and hemorrhage in the subintimal structure of the vessel.

In the opinion of Doles, his studies indicate that the severity of acute coronary occlusion can be controlled if a sufficient amount of vitamin K is given to maintain a normal prothrombin time. This also suggests that if routine prothrombin determinations are made on all patients, the detection of an early hypoprothrombinemia and the prompt use of vitamin K should be of importance in reducing the incidence of this heart condition.

A few years ago considerable interest was aroused by work done by Burrill and his associates[69] with respect to the effect of vitamin K on dental caries. In this study, the vitamin was incorporated into chewing gum. In the group given the vitamin K-containing chewing gum there was a reduction of new cavities by 60 to 90 per cent, while in the controls this reduction was 45 per cent. However, vitamin K did not seem to retard the progression of old caries. In view of these findings, the investigators expressed the opinion that, pending better methods, a means of caries' control by the use of vitamin K in chewing gum (a widely popular confection) should not be overlooked.

Several reports indicate that vitamin K may attain an important place in the treatment of urticaria and other allergic symptoms.[28] For instance in Black's[70] series of 156 cases, 90 patients (62 per cent) were relieved of their urticarial lesions following administration of menadione. Tbere were recurrences in a few cases, but prompt relief was obtained after another course of the vitamin. Similar results were obtained by McInnes[71] in the treatment of urticaria and angioneurotic edema. Using menadione in a series of 50 patients, good results were obtained in 70 to 75 per cent of the cases. She was so impressed with the results that vitamin K is now employed almost routinely while the basic causes are being investigated.

The possibility that a vitamin K analogue may be of value in cancer therapy is indicated in a recent report.[72] Experimentally, the substance has been shown to suppress all division in cultures taken from cancerous tissues. Mitotic activity was slowed down by about 30 per cent by the synthetic vitamin K and 35 per cent by radiation with x-rays. A combination of the vitamin and radiation treatment showed a synergistic action; mitosis being reduced by 85 per cent. No toxic or ill effects have been noted with the synthetic. The work is in a very preliminary stage, but has proved sufficiently interesting to warrant further study.

Another interesting potentiality for vitamin K is in the treatment of chilblains. The vitamin K treatment of eight cases, ranging from the mildest manifestations to severe and ulcerated form, was described by

Wheatley.[73] In four cases there was complete alleviation of signs and symptoms, with improvement in the other four.

In 1946, two Italian investigators[74] reported that synthetic vitamin K (menadione) exhibited marked antibiotic power.

In line with these observations are the findings of a group of American workers[75] with respect to the action of synthetic vitamin K_5 on fungi, molds and yeasts. As pointed out in their paper, delivered on September 14, 1948, at the 114th meeting of the American Chemical Society, the antifungal and antifermentation properties of vitamin K_5 suggest its potential usefulness in the clinical treatment of dermatomycoses and as a preservative in the food and beverage industries.

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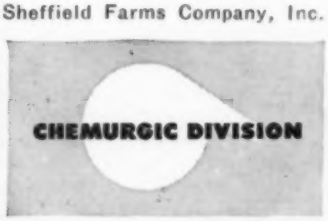

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Mob scenes for future Cecil B. DeMille productions will probably be stock shots of New York's subway commuters.

•

Instead of hiring writers of "Additional Dialogue," the producers will make more movies like "Johnny Belinda." In this one, the heroine is deaf as well as dumb.

•

And for "Special Effects"—trick photography—they will photograph the leading man before he is dressed up with his false teeth, toupee and gilt edge corset.

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Rise in Per Capita Earnings

(*Continued from page 601*)

It is a fact that the copy of the large national advertisers in the cosmetic field and their general sales stories are heavily slanted to conform with the real or supposed ideas of the historically largest number of their customers. But, does it make the same appeal to a person, man or woman in the State of Mississippi or to a farm woman in Iowa or North Dakota, where new customers are grown just as fast, and often faster, than among the predominantly city-bred clientele for whom most advertising seems to be written?

Obviously, the reader who is new to cosmetic usage, because she has quite recently acquired the financial wherewithal for purchase, has problems that are entirely different from those of the habitual users of cosmetics. Moreover, the fact that these new markets are most frequently found in the South and in the heavily-rural areas makes it almost certain that a large proportion of the cosmetic products, selling in the big Northern, Eastern and Western city markets, are not of the type that will appeal to readers whose approach to cosmetics is local rather than general.

What the cosmetic industry is facing in this new clientele of high income-earners is practically the same situation which confronts it in foreign markets and which, of course, is completely understood by the importer of cosmetics into the American market. Formulas need adjustment for climatic changes, different consumer temperament.

Which all makes it only too evident that these new customers cannot all be expected to buy indiscriminately every number of a national line, and that they very often will reject exactly those numbers that find their best sale in the majority of markets. Success may rather favor a wide diversification of individual numbers, selecting for special promotion those that find the best reception in those particular areas.

Until quite recently the opportunities offered the "fringe" manufacturers have been overlooked. By the "fringe" manufacturers are meant those manufacturers whose means prevent them from doing a national business, but who can concentrate with suitable products upon one of these newer markets, in the hope that they and their products will grow alongside the per-capita incomes of the areas which they serve. Since, during the war, large manufacturers were unable to meet the demand due to shortage of production facilities, raw materials, and other supplies, many of these minor manufacturers grew to fair size. These minor manufacturers can often find new outlets near their own homes in answer to the growing demand of their localities for articles specially designed to fit their local tastes.

But steps now being taken to fill the growing vacuum building up in unsuspected quarters, imperfectly served by the cosmetic industry, are largely of a stopgap variety. As yet there does not appear to have arisen a general awakening of manufacturers to the fact that a

new market exists—not always at their doorsteps, but near enough to call for attention. Properly utilized, there should be enough cosmetic purchasing power in these formerly substandard markets to send cosmetic sales up to the billion dollar level; not overnight, but certainly during the early years of the next decade.

Deodorant and Antiperspirant Preps.

(*Continued from page 605*)

used include stearic acid, whose incorporation has a decided stiffening effect, cetyl alcohol and spermaceti among others. Titanium oxide is usually used to impart a greater whiteness and opacity.

The general methods used in manufacture vary but usually consist in making the emulsion, first by incorporating the melted lipoids into hot water in which the emulsifying agent has been dissolved and stirring until the temperature drops to about 50°C. at which point the salts are introduced slowly and allowed to dissolve. The buffers are usually added after the temperature has dropped to room temperature, and the cream allowed to stand until it is filled.

If it is to be cold filled, proper arrangements should have been made during its formulation, since the temperature at which the cream is packaged is critical insofar as its ultimate consistency is concerned. If it is a warm fill, a rigid control must be kept on the temperature since consistency variations will take place with differences in temperatures at the time of filling.

Preparations which are solutions, present no great problem since the salts may be dissolved at room temperature. In some cases, however, certain of the buffers require heat for their incorporation. If urea is to be used, under no circumstances should it be incorporated at a temperature much exceeding room temperature.

In many cases bactericidal materials are added to act as a further deodorizer. Among these are zinc sulfocarbolate and aluminum sulfocarbolate. Both of these substances discolor badly in the presence of even small amounts of iron and if they are to be used proper precautions against iron inclusion in the system should be taken.

Sunlight---Jekyll or Hyde

(*Continued from page 597*)

The physiologic effects of ultra-violet light have been intensively investigated by Laurens, (Jr. A.M.A. 12-24-38, 2385), and we shall quote him. "One of the major reactions is in the skin and is familiar to all, i.e., the synthesis of vitamin D. This is an interesting and useful phenomenon but it is replacable by dietary sources of vitamin D. The blood stream shows a number of effects—lowered blood sugar, increased sugar tolerance, increased blood calcium, etc. None of these responses is of particular importance, or at least apparently not. There is some evidence according to Laurens, that blood pressure, normal or elevated, may

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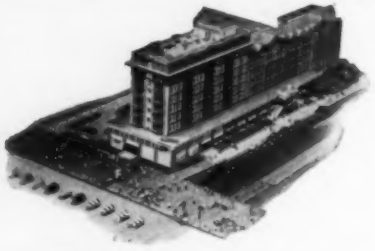

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be lowered by irradiation but it is not of clinical value. Metabolism does not seem to be markedly affected. Experimentally, growth is but mildly influenced by ultra-violet. Mineral metabolism is significantly altered by virtue of vitamin D synthesis, upon which is dependent the utilization and retention of calcium and phosphorous. Here again cod liver oil is a satisfactory substitute."

It is clear that individually, the physiologic effects of ultra-violet upon body mechanisms are not, or at least do not seem to be of deep consequence. Paradoxically and mysteriously, the total physiologic effects in concertation are directly or indirectly responsible for the substantial difference in our health status between winter and summer. The breakdown into months of our annual death rate yields provocative statistics given below:

Deaths 1946

January	139,416	July	107,740
February	119,898	August	**104,882**
March	**124,101**	September	106,055
April	114,112	October	113,416
May	115,979	November	112,981
June	110,106	December	126,381

March has the highest death rate, occurring as it does at the close of the winter when the population is weakened by a long, unending fight against disease. In April, the weather becomes a little more friendly and the mortality rate begins appreciably to drop. The difference between March and August—nearly 20,000 deaths—is most striking. What factor or factors can be credited with this very concrete reduction? Diets are probably better in summer than in winter but on the other hand total food consumption is definitely less in summer as compared with winter. Temperature variations, over-heated interior atmospheres, the debilitating effects of low temperatures, restricted physical activity, dampness, etc., are all unquestionably involved. The 20,000 differential cannot be ascribed to these factors alone. There is, however, one radical distinction between winter and summer that far overshadows any or all the factors given above, and that is the absence or presence of sunlight. This powerful, all-pervading force, to a major degree, is responsible for the impressive mortality decline during summer.

The most frequently repeated indictment against the Sun's beneficience is the higher ratio of skin cancer in the southern states in contrast with the northern states. This is quite correct. The same is true in any latitude for sailors, farmers, and others who spend inordinately long periods in the sun. Such statistics are not surprising. Solar energy has many functions to perform. There is the matter of photo-synthesis for an infinite number of different plants. The evaporation of water for later condensation into rain is another vital service. There are others. The sun was not placed here exclusively for Man. He should be intelligent enough to obtain an optimum dose of solar energy and that does not mean 8 to 12 hours daily

beneath a blazing sun. Animals have instinct to prevent such abuse. Skin cancer is only one angle of the neoplastic picture. A breakdown of cancer mortality by states is highly interesting.

Cancer Mortality, (per 100,000, 1945) Metropolitan Life

Maine	173	Virginia	89
New Hampshire	188	West Virginia	99
Vermont	170	North Carolina	71
Massachusetts	186	South Carolina	66
Rhode Island	142	Georgia	76
Connecticut	166	Florida	94
New York	186	Kentucky	106
New Jersey	166	Tennessee	91
Pennsylvania	158	Alabama	79
Ohio	150	Mississippi	80
Indiana	140	Arkansas	83
Illinois	165	Louisiana	96
Michigan	132	Oklahoma	108
Wisconsin	153	Texas	88
Minnesota	155	Montana	143
Iowa	165	Wyoming	98
Missouri	154	Colorado	132
North Dakota	122	Arizona	78
South Dakota	128	Utah	83
Nebraska	145	Nevada	102
Kansas	138	Washington	130
Delaware	122	Oregon	138
Maryland	127	California	138
District Columbia	117	Idaho	101

Note the difference in mortality between those states which are characterized by sunshine a greater part of the year and those in the more northern latitudes. For instance between Virgina, 89 and New York, 186—almost 100 per cent more for New York. These comparisons run practically parallel for all the states. An inference which can be drawn from these statistics is that solar radiation in some manner, directly or indirectly, reduces the virulence or number of neoplastic cases—even though this very same radiation does produce a greater number of dermatologic neoplasms, which as a rule are not fatal. While these figures are provocative, it would be foolhardy to jump to any conclusions. There are a number of unknowns still unknown. Cancer diagnostic and statistical facilities are poor in many of the states having low rates which might be the source of considerable error. It is also said that the North Atlantic states, having the highest rate, have an older population which also influence mortality tables. Just why they should be older in the North Atlantic states the writer was not able to find out. Many of the low rate states have a high Negro population. Cancer mortality is lower in the Negro race than in the White race. This might also be another factor for error.

Dr. Sigismund Peller, Johns Hopkins University, School of Hygiene, states, "Exposure to sunlight during childhood and adolescence, though it may

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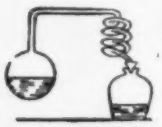

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result in cancer of the skin or lip, helps to prevent death due to cancer." He cites figures, from U. S. Army records, to show that the average case fatality rate from cancer for white persons born south of the Mason-Dixon line is substantially lower than for northerners. Among Army officers, it is 48.5 per cent lower than in average metropolitan areas. It is the writer's opinion that sunlight and outdoor living do play some sort of a role in the resistance to neoplastic disease although no positive conclusion can be drawn.

Notwithstanding newly appearing academic discourses on the undesirability of exposure to sunlight, sunbathing does and will continue to increase. There is sufficient general evidence available to support belief in its profound role, directly or indirectly, in human physiology. Man has proven that he can live without sunlight but he is definitely better off with it. There is no denial of immense abuse of this powerful force. The occurrence of many millions of solar burns annually is concrete proof of same. These injuries are unnecessary and undesirable for manifold reasons; partial or complete incapacitation is positive, and this means the reduction or ruination of irretrievable vacation time. Deterioration of skin tone is a certain sequel which to the female is a distressing loss. A severe burn leaves the skin in an ugly, blotched, aged and generally unattractive condition. The ability to tan is inhibited or completely lost not only for that summer but possibly for many succeeding summers. Failure to tan is a grievous deprivation to many persons, especially the female. Chronic mild or repeated severe burns give rise to various forms of dermatologic pathology; the skin becomes dry, aged, inelastic—warts and moles are activated or may make their inital appearance. Other potential lesions are exaggerated such as freckles, eczema, exoderma pigmentosum, pruritis, etc. These disorders are frequently harbingers of deeper, more serious skin disease.

Another phenomenon more or less unknown is that the temperate zone white man cannot withstand unlimited quantities of actinic light. The writer has observed many persons indulging in days, weeks and months of excess insolation without any apparent symptoms of injury—in fact on the contary, a deep coffee tan was present which was the envy of those less fortunate. Nevertheless, formidable pathologic changes were taking place. Many months later this pathology was evidenced by the appearance of depigmented areas which failed to tan after renewed irradiation. A coarsening and thickening of the skin was also observed especially at points of articulation such as the anterior side of the elbow. The foregoing is proof that the average person simply cannot permit unlimited periods of solar exposure even though he may be apparently resistant. If these persons knew what was in store for them after such indulgence, they would be only too happy to use a sunburn preventive to circumvent this exposure.

Defense against excess ultra-violet energy consists principally of proliferation, cornification and pigmen-

tation. These processes, if excessivley stimulated, eventuate into some sort of degenerative stage. Thus points of greatest stimulation and consequently greatest response, are first to show neoplastic changes. Cancer development is not only a sequel to an initial precancerous lesion but it is also the result of continued trauma at this point. The injury may be either mechanical, chemical or photogenic—in this case, light is the exciting factor.

The suntan industry should be very materially interested in the various aspects of solar radiation—its beneficience and dangers. The truth of the matter is that this industry has been completely indifferent. If the market is to continue and expand this attitude must change. Disparaging publicity such as published in Hygeia and the Saturday Evening Post might soon result in a decreased market if cognizance is not taken of same.

We have briefly discussed the factors responsible for the unparalleled wave of sun-worship. We have present a few salient points relative to the influence of sunshine on public health. Much more can and should be said on this subject. We have also brought into focus the widespread injury, immediate and future resulting annually from over-exposure to strong sunlight. Herein lies a magnificent opportunity for the suntan industry to render the public a vital service with financial repercussions for the industry assured. It is high time the public was given some authentic, useful information regarding sunbathing and sunburn. Guidance as to how to get the most from sunlight without injury would be most appreciated by the sun conscious public. This will require a radical departure from the "fluffy" advertising thus far employed. Instead convey the facts that the sun is a mighty and healthful force with great capacity for harm if abused. Add further that a severe sunburn can partially or completely ruin a vacation, that treatment will be painful and expensive, and that after recovery, the skin will be more sensitive than before the injury. Tell also that little or no tan will follow a serious burn, not only for that summer but possibly for many succeeding summers. In unmistakable language the public should be informed that severe or chronic solar dermatitis will invariably produce ugly, wrinkled, aged, unattractive skin. If such dermatologic insult is continued long enough, skin cancer can be the final payment. Nor should it be omitted that the temperate zone white race does not possess an integument which can successfully resist abnormally long and repeated exposures to powerful sunlight, and that though there may not be an apparent or visible sign of damage and a deep tan may be present—there is strong evidence that subtle, profound pathologic changes are taking place.

All this adds up to the fact that the average person with unlimited vacation time should use a sunburn preventive. Those with but a few days must certainly avail themselves of some sort of protection against over exposure. The sunbathing public is totally unaware of any of these facts. Verification of same may

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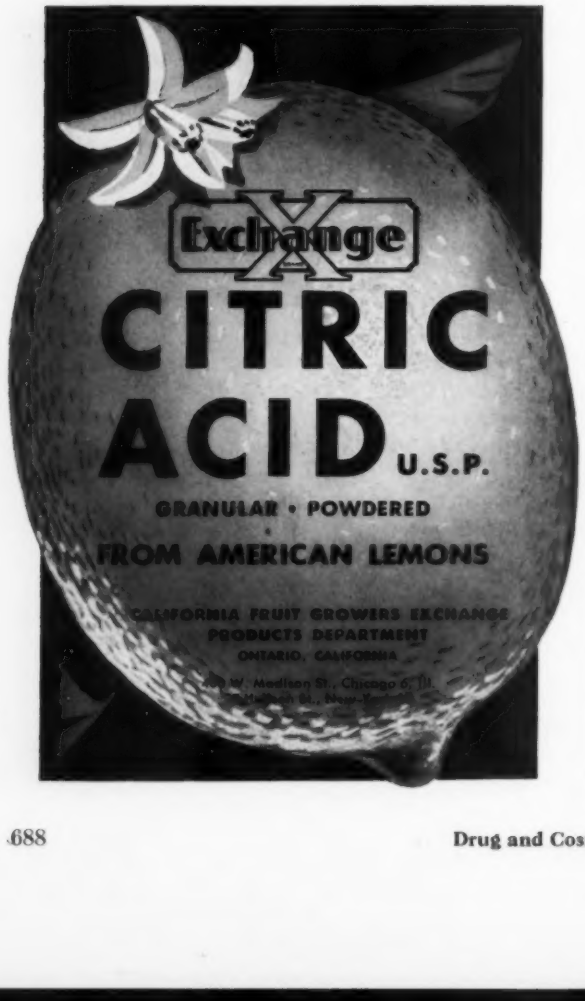

be quickly found at any beach or resort pharmacy. For every person who buys a sunburn preventive, fifty persons purchase some sort of remedy with which to *treat* sunburn. Allowing for those products which afforded no protection and for unintelligent application, we have a practically 1:50 ratio of those who do and those who do not use sunburn preventives. This represents millions of new customers who need but to be told to be sold. These estimates are not swivel-chair observations but are based on drug-counter experiences. For instance a very popular greaseless cream offered for the treatment of sunburn during the summer months, sold 25,000,000 units last year. Of this number more than half was sold during the summer months—obviously for sunburn. In addition to this figure, if we were to add the countless other products and remedies sold during the summer months, for the above purpose, the writer's estimate would seem indeed conservative. The suntan market is still virginal and is capable of yielding many times the present volume of business, if and when the suntan manufacturers decide to expend distinct efforts in the cultivation of same.

Summation:

1. Sunlight is a vast, powerful and healthful force.
2. Excess insolation can and does result in countless injuries annually.
3. But a very small fraction of the sun conscious public have any confidence in or employ a sunburn preventive.
4. Honest, informative advertising would open an enormous new market.
5. The prevention of solar injuries by either controlled exposures or the use of sunburn preventives would constitute a real public health service.

Fewer Outlets---Surer Profits

(*Continued from page 598*)

These people, that is the really competent retailers, are perfectly capable of deciding whether this pattern of distribution gives them a franchise which enables them to use their own ability as merchants in creating sales and to join with the manufacturer and his advertising in building up a larger clientele. If the distribution of this product is limited to a group of able retailers, all of whom are contributing to expanding consumer interest and consumer buying of this product, these retailers are willing to use their own time and substance in building sales for this product. If, however, the manufacturer expands his distribution too far and in this way includes too many other retailers who live not by creating sales, but by intercepting sales, then these capable retailers turn their energy to products where they can more nearly retain the full benefits of the clientele which they have built up.

Another perfume manufacturer who has been substantially reducing the total number of retail accounts shearing off those which have shown either no ability or no inclination to sell, has been making very real

strides by an intelligent application of the appeal which retail franchise has to the retailer. This manufacturer has put it bluntly to the retailers who retain his merchandise that they are expected not only to maintain but increase his volume in that territory. Since this is a profitable line with an excellent consumer recognition, these retailers have gladly responded by extending a more favorable store position, a better attitude on the part of the store girls, and a substantial increase in special promotions in which the store is paying one half the cost of the cooperative advertising.

It would seem possible that in very many wasteful practices in distribution lies a primary solution to the high break-even point. It would seem time that the manufacturers broke away from their volume worship and stopped selling anyone who costs them money and returns a net loss, no matter what volume he may retain, and no matter what bogy from competition may lie in the hazy background. It would also seem sensible that those manufacturers, who are not selling a mass utility product, but a product requiring customer choice and selection, would examine with more care the theories, the experiences, and the case histories in selective distribution. This is admittedly a wide field of exploration, extending from the intensely limited and selected franchise, which might be extended for a Steinway piano for example, to the practices of manufacturers of a commodity in the dollar price range, who seek the outer limits of selected distribution in this industry, running about 6,000 stores and including all of the stores which have any ability to sell. Distribution of this sort is always a custom-made affair, which must be tailored to the product and its price, to the company and the length of time it has been in business and to many other factors. But always, in every form of selected distribution, there must be included as the major asset of this form of distribution some application and use of the term, "Retail Franchise." It is in a study of this term, from the viewpoint of the dealer and from a viewpoint of market analysis of the product, that certainly lie the opportunities for a cost reduction of distribution and an increase in net profits, and probably in volume sales.

Stabilization in Alcohol

(*Continued from page 595*)

be minor, and alcohol would become a raw material on which costs—always excepting tax changes—could be projected quite accurately into the future.

For the outlook as to fermentation raw materials for production of alcohol—molasses, grain, potatoes—we must face the fact that the immediate future at least points to continued high prices for agricultural products, and there is no prospect as far as anyone can see for change in this picture. The world wide demand for food and the general realization throughout the world that food is all-important to the welfare of people everywhere, means that foodstuffs of all kinds will continue to bring higher prices than they did before the

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war. And from the results of the recent election it appears that the agricultural portion of our population is going to continue in a prosperous condition, receiving high prices for their crops.

Furthermore, international agreements regarding the markets for goods of all countries are the rule today and apparently will continue to be the rule. Cuban molasses for import into this country is still in the hands of the Government of this country. Under these international agreements the Government of this nation is engaging in the formation of cartels, even though cartel is a horrible word of German origin that is certain to cause any individual or corporation many long days in court if he discovered to be part of one.

Lower prices for alcohol will broaden its use, just as the higher prices narrowed its application in industry. As a result of the high prices, use of alcohol as a solvent declined with the cheaper methanol and isopropyl replacing it. Likewise, use of alcohol as an antifreeze has largely given way to the cheaper methanol for this use, and to the permanent types, ethylene glycol and glycerine, which were cheaper than alcohol for the entire winter season. These substitutes, it must be borne in mind are all of non-agricultural origin, indicating that the Farm Chemurgic idea has had its growth stunted—especially if conditions continue to follow along the trend of the recent past, the present, and the immediate future.

With alcohol production from petroleum on the increase, competition between fermentation materials and ethylene from petroleum as raw materials is certain to result. Molasses costs will go lower as the demand for its use in alcohol production falls off, and this will be reflected in lower prices for alcohol from this source. So, while a swing toward petroleum as a raw material for alcohol is in progress, this movement will have the effect of reducing costs of alcohol from all sources—with the possible exception of grain—benefiting the consumers of alcohol as a whole.

Under these circumstances we can look forward to a gradual settlement in the market for alcohol and for a more stable price structure. How long this will take to be completed is anybody's guess. It is dependent upon many factors, the main one of which is the extent to which the petroleum producers will go in expanding their alcohol producing facilities. Another important factor is how far down prices of molasses will go in an effort to meet the competition from petroleum gases in the face of the fact that once these plants for production of synthetic alcohol are built, they are certain to continue in operation.

For the consumer of alcohol the future looks promising. Supplies should be plentiful, and prices should have a trend toward lower levels for some time into the future. Eventually prices should become relatively stable at lower levels without any tendency toward a reversal upward. It would appear that alcohol is in the process of becoming one of those raw materials to which the consumer will have to give little thought as to availability of supplies and changes in prices.

Laxative Claims

(Continued from page 599)

"(The product in question) is not a cure or remedy for constipation and possesses no therapeutic value in the treatment of constipation, except that in its capacity as a laxative it may assist in the temporary evacuation of the intestinal tract."

Auto-intoxication, often referred to in laxative advertising in recent years, seems to be rarely mentioned in advertising today. This is due to the fact that evidence has not been produced to substantiate the claim that such a condition exists. One authority covers this phase of the subject as follows:

"Considerable doubt exists in the minds of many able observers that chronic intestinal toxemia is a true clinical entity. The safeguards supplied by nature in the intestinal mucosa, lymph supply and liver appear to be quite adequate for the protection of the body against the ordinary chemical substances, the usual products of putrefaction, or the fermentation activity of intestinal bacteria. No one questions the fact that acute gastro-intestinal upsets may result from the ingestion of spoiled or contaminated foods, whether the primary reactive agents be chemical or bacterial. However, what diagnosis may one make for a rather large group of patients who are disturbed periodically or intermittently by 'bilious' spells which are characterized by constipation, flatulence, physical fatigue, mental lethargy, insomnia, anorexia, furred tongue, foul taste and headache? Our colleagues of a preceding generation treated a vast number of these patients and they were honest in their belief that these symptoms were due to intestinal absorption as the result of constipation or auto-intoxication."

A manufacturer of a product called Pure Bile Salts agreed with the Federal Trade Commission to stop saying that the preparation "will stimulate generally the functions of the liver except to the extent to which it will increase the formation and secretion of bile; is of general benefit in cases of gall bladder removal; is necessary to proper digestion or is of any assistance to digestion in any cases other than those where improper digestion occurs because of inadequate formation and secretion of bile; or will be of value in retarding putrefaction or gas formation."

A manufacturer of laxative tablets agreed to stop saying that his product "is a cure, or remedy for, or has therapeutic value in the treatment of malaria, colds, or fevers, poor digestion, acid or gas on the stomach, over-indulgence in food and drink, clogged bowels, neuralgia, rheumatic pain and fever, sallow complexion, pimples, sores, boils, or skin irritations, or that it has any value in the treatment of biliousness or excess bile in the system, headaches, coated tongue, bad breath or bad taste in the mouth, in excess of such temporary relief as may be afforded by a laxative when such conditions are due to or caused by constipation."

The FTC ordered a manufacturer from saying that his product "possesses any therapeutic value in the

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treatment of loss of appetite in excess of such relief as may be afforded through a temporary stimulus of the appetite, and through the partial evacuation of the intestinal tract in those cases where such condition is due to constipation."

Another prohibited statement is, "constipation causes an accumulation of poisons in the system, and that (the product in question) will rid the system of poisons."

Food and Drug Administration officials frown on references to biliousness in laxative claims. They contend that this is a term used by members of the medical profession many years ago, but very rarely used by them today. They now look on such a condition as a symptom of a liver disorder which cannot be successfully treated by self-medication. They are of the opinion that what the layman means when he speaks of a "bilious attack" are the symptoms of headache, sour and upset stomach, loss of appetite, flatulence, physical fatigue, mental lethargy, insomnia, and bad breath that frequently results from constipation. FCA officials also frown to references to long-standing or chronic constipation, stating that products for self-medication are for the relief only of constipation which occurs occasionally.

ABSORPTION BASE: Please suggest a working formula for a lanolin absorption base. Brooklyn.

One such, available from the formulary of the University of Iowa Hospital, consists of:

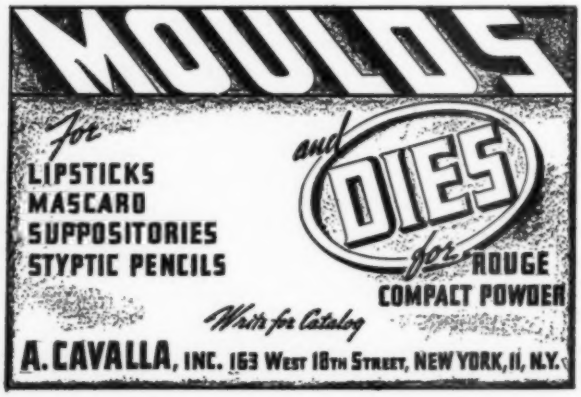
Cholesterin	**3.0 Gm.**
Cottonseed oil	**3.0 Gm.**
White petrolatum	**94.0 Gm.**

Heat the white petrolatum and cottonseed oil to 145°C. Remove from heat, add the cholesterin and stir until almost congealed. Then pour into jars.

Another somewhat more complicated but quite effective preparation consists of:

Sorbitan Monooleate (Arlacel 83)	**6 per cent**
Ceresin wax (64°C, or equivalent)	**15 " "**
Petrolatum (medium to long fibre)	**24 " "**
Mineral oil	**45 " "**
Lanolin (anhyd.)	**10 " "**

Preparation: Warm and mix.



SOLIDIFIED COLOGNE: I have been informed that I may be able to get from you a formula for a solidified cologne. Oakland.

Essentially, such a product consists of a suitable perfume compound stiffened with a little soap. As explained by Poucher, an authority in this field, solidified eau de cologne is nothing more than a solid and transparent alcoholic soap, prepared by dissolving 5 per cent of sodium stearate in warm alcohol, to which has been added the oils, and carefully running into suitable moulds. Another method preferred by some manufacturers is to dissolve at gentle heat a first-class milling base in alcohol direct. Ten per cent of soap chips or there about make a fairly satisfactory product. This is often slightly tinted with a small quantity of chlorophyll or other green dyestuff, and is then run into plated moulds, which are cooled until solidification is effected. The stick should be wrapped in tinfoil or cellophane to facilitate handling, and packed for sale in air-tight tubes. Exceptional cooling effects are obtained by the addition of suitable quantities of menthol.

MASCARA: Would you kindly oblige the writer with a formula of a black and brown mascara in cake and cream form. Is there any product which can be made in these forms by a variation in production? Montreal.

A basic formula which can be adjusted to meet specific needs is as follows:

Glyceryl monostearate	10.0
Triethanolamine	3.0
Stearic acid	15.0
Petrolatum	20.0
Gelatin	2.0
Water	17.0
Beeswax	25.0
Prepared lamp black	8.0

Soak the gelatin in hot water. Melt the beeswax, stearic acid, petrolatum and glyceryl monostearate, stir in the lamp black thoroughly. Add the triethanolamine to the gelatin suspension and then add the mixture to the melted mass. Stir well. Any type of mascara can be made from this base, the beeswax being the regulator, by varying which any degree of consistency can be obtained. Brown mascara can be obtained by using brown pigment instead of the lamp black.

AFTER SHAVE LOTION: We are interested in a "skin refresher" as used by men after shaving. Boston.

A standard formula for a shaving lotion is as follows:

Alcohol	20.0
Zinc sulfate	0.5
Glycerine	5.0
Benzocaine	0.2
Perfume	0.3
Water	74.0

Dissolve benzocaine and perfume in alcohol, add glycerine. Dissolve zinc sulfate in water and add to above. Mix and filter.

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FOR SALE: 4—Dry Powder Mixers 600 lb., 1200 lb., 2000 lb., 9—World or Ermold Semi-automatic Labeling Machines; 2—World Rotary Automatic Labelers, motor driven, late serial number; 1—Stokes 79-80 Filler, Closer Clipper, motor driven; 60—Stainless Steel, Aluminum, Copper, Glass lined, jacketed Kettles, some agitated; 2—Stokes "R" single punch Tablet Machines, 2½" dia., 7—Stokes, "F", ¾"; 1—Karl Kiefer Rotary 8 spout Vacuum Filler; 14—Copper percolators, 20" to 36" dia.; 1—No. 2 DH Micro-Pulverizer, 4—No. 1 SH; 66—Tanks: 26 Stainless Steel, 250, 350 gal.; 40 Aluminum 800, 650 and 250 gal. Send for latest copy of Consolidated News listing complete stock. We buy your Surplus Equipment. Consolidated Products Co., Inc., 20-21 Park Row, New York 7, N. Y.

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FOR SALE: 1—Day Jumbo Stainless Steel Mixer 1669 gals.; 2—Ro-Ball Sifters, Stainless steel, 40" x 120", single deck; 2—Rotex Sifters 20" x 81", 40" x 74" triple and quadruple deck; 14—Powder Mixers 400 lbs. to 4000 lbs.; 2—Stokes & Smith Gl Powder Fillers; 2—Pfaudler 75, 150 gal. glass-lined, jacketed Mixing Tanks; 1—Sameo 7 spout Vacuum Filler; 4—2TH, 3TH Mikro Pulverizers; 1—Knapp No. 429 Top and Bottom Carton Sealer; 20—Stainless Steel Tanks and Kettles, 20 to 500 gals.; 8—Burt, World, National, Can and Bottle Labelers; Filters, Pumps, etc. Send for News Flash. Brill Equipment Company, 225 West 34th St., New York 1, N. Y.

STAINLESS KETTLES, jacketed 100 lb. pressure, 50, 100, 150, 200, 300, 500 gal. sizes; 50 Stainless mixing and storage tanks 30 to 500 gal; Colloid Mill 6" Stokes "R" Single punch tablet press; Colton No. 2 and Stokes RD4 rotary 16—punch tablet presses; Schutz O'Neill Pulverizers 16" and 22". Perry, 1523 W. Thompson Street, Philadelphia 21, Pa.

FOR SALE: 4—Day "00" Sifters & Mixers 15 lb. capacity; 8—Dry Powder Mixers 600 lbs. 800 lbs., 2500 and 3500 lbs.; 2—Colton No. 4 Worm Tube Fillers with No. 2 Closers & Crimpers; Stokes 90-C Automatic Tube Filler & Closer; World & Pony Semi-Automatic Labelers; Mikro "Bantam SH" Pulverizer; Raymond 8" Screen Mill; Sanco Jr. 6 Stem Vacuum Filler; 2—S & S Model G-1 Powder Fillers; Stokes "F" and Colton No. 2 & 3B Single Punch Tablet Mach; Stokes Rotary "BB" Tablet Machine; New Stainless Steel Tanks & Kettles; Agitators; Conveyors. Send for Bulletin A-21. We buy your surplus. The Machinery & Equipment Corp., 533 West Broadway, New York 12, N. Y. GR. 5-6680.

OVERHAULED EQUIPMENT for Sale: 10 Vacuum Fillers hand type to fully automatic; Resina Capper; 27 Labelers hand type—Semi-automatic—fully automatic; Pumps, Rinsers; Air Blowers; Filters; Tanks; Bottling Tables; Conveying Equipment. Write for list or advise your requirements. Seifert Machinery Company, 1433-47 N. 12th Street, Philadelphia, Pa.

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PHARMACIST preferably with M.S. or Ph.D. to teach in recognized School and to supervise manufacture of tablets, ointments, and general pharmaceuticals to be used in University Hospitals. Duties limited permitting research. Young, energetic, congenial staff. Superior undergraduate student body. Enrollments limited. Respectable salary and rank, dependent upon qualifications. For further information address the Dean, School of Pharmacy, Western Reserve University, Cleveland 6, Ohio.

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